

9

S-11727

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

L-I GENERAL

1. POLITICAL
2. ECONOMIC
3. SOCIOLOGICAL

DOI up to February 1959

except where noted.

STATE, NAVY reviews completed

L-I

SECRET

3

NAVY-72222, Doc 1, Rev 1

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

## 1. POLITICAL

### a. General

Laos consisted of a rather loose aggregation of princely states when it came under French control in the late 19th century. France governed the northern part of the country (Kingdom of Luang Prabang) as a protectorate and the southern part as a colony. During World War II Japan sponsored an "independent" Kingdom of Luang Prabang.

After the Japanese surrender, a superficial and short-lived resistance movement against the French developed. Subsequently, the French occupied all of Laos and recognized the nominal suzerainty of Luang Prabang over the entire country. An agreement of 19 July 1949 made Laos an Associated State within the French Union. On 22 October 1953, France signed a treaty of friendship with Laos recognizing it as a fully independent and sovereign state within the French Union.

### b. Domestic Policy

The major problem confronting Laos is the increasing influence of the Communist Neo Lao Hak Zat Party (NLHZ). For this reason, domestic policy is to a large part devoted to combatting this threat.

The Communist movement in Laos is concentrated in the northern provinces lying adjacent to Communist China and North Vietnam and is a direct result of Communist invasions of the northern part of Laos in 1953, by North Vietnamese troops, who were fighting the French in Indo-China. Under the terms of the Geneva Armistice, Laos was neutralized, with the Pathet Lao, or Laotian Communist insurgents, being integrated into the Government and Army. Integration of the Pathet Lao, however, was not accomplished until 1958. Prior to integration, the Pathet Lao and the Laotian Government fought each other. Under the terms of the 1958 integration agreement the Pathet Lao was disbanded and reformed as a legal, political party, the NLHZ. Two battalions of Pathet Lao troops were integrated into the National Army. Two others, approximately 4,500, were dispersed among the populace. In May 1958 elections were held in the areas formerly controlled by the Pathet Lao. As a result of the election the NLHZ and the fellow-traveling Santiapha party won 16 seats, the various conservative parties 7 seats. At the present time in the National Assembly, there are 36 Conservative Assemblymen and 16 Leftist with the remaining 7 seats being held by independents. While the Communist gains were impressive, they were in fact, aided by conservative disunity and lack of coordination.

A recent organization of a civilian reformist group, the Committee for the Defense of National Interest (CDNI), dedicated to removing corruption and thereby removing NLHZ grounds for attacking the Government and also dedicated to lessening the influence of the NLHZ, has had some degree of success. The CDNI has also made contacts with the Army and it appears that an effective conservative group is likely to result from their cooperation. In addition, a government formed in August 1958 under the leadership of Premier Phoui Sananikone has taken a firm anti-Communist stand and excluded the NLHZ from the government.

### c. Foreign Policy

Laotian foreign policy is that of neutrality patterned after that of Nehru in India. Despite heavy pressure from the Chinese Communists and the North Vietnamese, the Government of Laos has been successful in maintaining its neutral position.

French and American aid is a major factor in the stability of Laos. The Chinese Nationalists recently opened a consulate in the capital and at the present time Laos looks to the West. Medical assistance teams from the Philippines and the U.S. have done much to improve relations with Laos, and South Vietnam has recently extended limited aid to Laos. The situation is favorable at the present time for a continuation of Laotian-Western cooperation.

### d. Government Structure

Laos is a constitutional monarchy. The legislature consists of a King's Council of nine members and an elected National Assembly of 59 members.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

The Prime Minister is designated by the King, but this is more of a formality than evidence of royal power, for the Prime Minister has to survive a confidence vote in the National Assembly, thus giving the National Assembly an effective voice in the selection of the Prime Minister. The National Assembly is charged with the responsibility of passing laws and representing the will of the people. Assisting the Prime Minister is a Cabinet, consisting predominantly of Assembly members, although this is not a requirement for holding a Cabinet position.

An elementary form of regional government exists in the 10 provinces of Laos. Each province is administered by a governor, who is assigned by a locally elected provincial council. Important urban areas also have special administrative status.

The Auto-Defense Forces is a poorly organized, partly-trained and equipped militia. With a total strength of just over 16,000, it constitutes a territorial defense organization designed to complement the Regular Army. It is subordinate to the Ministry of National Defense. Its primary peacetime mission is to assist in the maintenance of public security, control subversion, and foster patriotism. It supports the regular Army in wartime. The Lao National Police, numbering approximately 2,900, is a civil security organization serving both rural and urban areas. It is an agency of the Ministry of Interior and is controlled by the Director General of Police. While its primary mission is to perform routine police duties, it has an additional mission of supporting the army and Auto-Defense Force in maintaining internal security. The effectiveness of the National Police is quite low.

e. Personalities

US Representative in Laos (SEP 1959)

Ambassador	Hon Horace M. SMITH
Army Attache	Lt Col J. M. HOLLIS
Chief, PEO	Mr. John A. HEINTGES

Officials of the Lao Government (16 FEB 1959)

SISVANG-VONG Sundet Prah	King
PHOU Sananikone (LHL)*	Prime Minister, Minister of Planning, Minister of Communications
KATAY Don Sasorith (LHL)	Deputy Prime Minister, Minister of the Interior, Minister of Defense
KHAMPEAN Panya (CDNI)*	Minister of Foreign Affairs
LEUAM Insixiangmay (CDNI)	Minister of Economy, Minister of Finance
BONG Souvannavong (IRS)*	Minister of Education, Minister of Health, Minister of Religion
PHOUMI Nosavan (AUG, 1959)	Secretary of State for Defense
PAN Sisouphanthong (LHL)	Secretary of State for Communication, Secretary of State for Public Works
INPENG Suryadhay (CDNI)	Secretary of State for Justice
TAN, Chounamont (LHL)	Secretary of State for Public Health
SISOUK Na Champassak (CDNI)	Secretary of State for Information
LIEP Choumphonphakdi (LHL)	Secretary of State for Veterans Affairs

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

Laos Military Officials

Brig Gen SOUWTHONE Pathammavong

Chief of General Staff, Lao Armed Forces;  
Commander in Chief, Lao National Army

Brig Gen OUANE Rathikoune

Chief of Staff, Lao National Army

Major KHAM HOU Boussarath

Assistant Chief of Staff, Intelligence,  
Lao National Army

\*LHL: the Lao Hom Lao, the conservative coalition of former Nationalists and Independents now forming a 60% majority in the National Assembly. CDNI: the Committee for the Defense of National Interests, a conservative reformist group composed of military and civilian reformists. IRS: the Lao Roum Samphan or "Lao National Union" party.

\*\*\*\*\*

BIOGRAPHIC SKETCH

NAME: SISAVANG-VONG

Laos title: Somdet Prah (variant: Sundet Prah).

French title: Sa Majeste

PRESENT POSITION: King

DATE OF BIRTH: 14 Jul 1885

PLACE OF BIRTH: probably Luang Prabang

FATHER: King ZAKARINE

MOTHER: Queen Tiao THONGSI

WIFE: Has "many" wives

CHILDREN: Crown Prince SAVONG-VAITHANA  
Prince KHAMMAO

EDUCATION: Unknown

RELIGION: Buddhist

CAREER:

- 1903: Acceded to throne of now defunct Kingdom of Luang Prabang.
- Mar 1945: Japanese abrogated French Protectorate of Laos. Under pressure of the Lao Issarak (Free Lao) regime, SISAVANG-VONG abdicated.
- Oct 1945: With re-establishment of French control and institution of the "Provisional Government of Free and Independent Laos", proclaimed King of Laos. However, since he himself was reluctant to antagonize the French, who were opposed to the Provisional government, he was again compelled by the Lao Issarak to vacate the throne in late Oct 45.
- May 1946: Reseated on the throne of Laos by the French.
- Aug 1946: Adopted new democratic political structure for the Kingdom.
- 1947: Proclaimed first Constitution, making Laos a parliamentary monarchy.
- 1953: Laos invaded by the Vietminh; SISAVANG-VONG refused to go into exile.
- 1954: Issued proclamation mobilizing Laos against the Vietminh.
- 25 Sep 54: Visited by BAO DAI, Chief of State of Vietnam; Crown Prince BAO LONG; Prince BUU LOC; and NGUYEN De.
- 6 Dec 54: Visited by British High Commissioner Sir Malcolm MACDONALD.
- 13 Jun 56: Sailed from Singapore for France to undergo treatment for rheumatism.

\*\*\*\*\*

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

BIOGRAPHIC SKETCH:

NAME: SAVANG-VATTANA

RANK: Crown Prince

PRESENT POSITION: None

LANGUAGES: French

DATE AND PLACE OF BIRTH: 1907, Luang Prabang.

FAMILY: Married. Wife - (name unknown)  
Children - 5 (all educated in France)

EDUCATION: Educated in France. Master's Degree in Law from the Ecole des Sciences Politiques in Paris.

RELIGION: Buddhist

POLITICS: Unknown

PAST CAREER:

- 1930 - Secretary General, Principality of Luang Prabang.
- 1945 - President of Privy Council.
- 1945 - Sent to Saigon to express the gratitude of the Kingdom to the Japanese for measures to the independence of Luang Prabang.
- 1945 - After Japanese defeat, and the abdication of his father, renounced all affiliations with the French.
- Feb 1953 - Opened the National Assembly of Laos.
- ? 1954 - In France.
- Sep 1954 - Returned to Laos.
- Jul 1955 - Visited Thailand at the invitation of the King of Thailand, for five days.
- Sep 1955 - Visited India on good will mission.
- 13 Jun 1956 - Went to Singapore to see the King off to France.
- 28 Jun 1956 - Went to France in time to meet his father and also visited England, Belgium, and the Netherlands. prior to returning to Laos.
- ? 1956 - Returned to Laos.

\*\*\*\*\*

BIOGRAPHIC SKETCH:

NAME: PHETSARATH

RANK: Prince

PRESENT POSITION: No official post.

LANGUAGES: French, some English

DATE AND PLACE OF BIRTH: 1890, Luang Prabang Province

FAMILY: Wife, his second, and two children. Half-brother to SOUVAINA-PHOUNA and Pathet Lao leader Prince SOUPHANNOUVONG.

EDUCATION: Completed his primary studies in Indochina, studied in France between 1905 and 1912, and also spent a year at Oxford.

RELIGION: Buddhist

POLITICS: Unknown

PAST CAREER: 1941-1946 - Viceroy of Luang Prabang

L-1-4

SECRET

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

1945 - Advisor to Provisional Free Laotian Government.  
1946-1957 - Exile in Thailand; served as Regent of Free Laotian Government in Bangkok until it was dissolved in October 1949.  
22 Mar 1957 - Returned to Laos.

\*\*\*\*\*

BIOGRAPHIC SKETCH:

NAME: SOUVANNA-PHUMA

PRESENT POSITION: former Prime Minister. Presently not in government

LANGUAGES: French

DATE AND PLACE OF BIRTH: 1901, Luang Prabang

FAMILY: Married. Wife - Franco-Lao Metisse (Roman Catholic)  
Children - 5 (Roman Catholics)

EDUCATION: Educated in France as an Engineer.

RELIGION: Buddhist

POLITICS: A leader of the Lao Hom Lao ("Rally of the Lao People").

PAST CAREER: 1946-1949 - Minister of Public Works and Communications in the Free Laos Government at the time of his exile in Thailand.  
1949 - Returned to Laos from exile.  
1950 - Minister of Public Works and Communications and Planning in the Phouy Sananikone Cabinet.  
Jun 1950 - Member of the Lao delegation to the interstate conference at Mt Pau.  
1951 - Appointed President of the Council of Ministers and called upon to form a cabinet.  
Sep 1951 - Member of the delegation to the Japanese Peace Treaty Conference in San Francisco.  
1951-1954 - Prime Minister; Minister of Public Works, Communications, Planning, and Information.  
Mar-Oct 1954 - Prime Minister; Minister of Planning, Communications, and Information.  
1955 - Visited Thailand.  
Mar 1956 - Prime Minister; Minister of Defense, Veterans Affairs, Foreign Affairs, and Information.  
1957 - Prime Minister; Minister of Defense, Veterans Affairs, and Information.  
Jul 1958 - Resigned premiership.

\*\*\*\*\*

BIOGRAPHIC SKETCH:

NAME: SOUPHANOUVONG

RANK: Prince

PRESENT POSITION: Presently not in government.

LANGUAGES: French

DATE AND PLACE OF BIRTH: 12 July 1912, Luang Prabang

FAMILY: Married. Wife - Le Thi Ky NAM  
Children - 5

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

EDUCATION: Studied in Handi and then in France where he received the diploma of Government Civil Engineer.

RELIGION: Unknown

POLITICS: Leader of the former Pathet Lao, now Chairman of the Communist Neo Lao Hak Zat ("Lao Patriotic Front").

PAST CAREER:

- Upon return to Indochina from France, entered the French administration as Engineer of Public Works as a member of the local Indochinese personnel.
- Aug 1945 - At the time of the Lao Issara insurrection, organized "regional committees" at Savannakhet and Thakhet.
- Oct 1945 - Minister of Foreign Affairs and Commander-in-Chief of the troops of the pseudo-rebel government, organized by Phaya KHAMMAO, the so-called Xieng Mao.
- 1946 - Organized Pathet Lao Forces to fight France.
- Mar 1947 - Directed the general offensive undertaken by the rebels against Laos, with the support of the Vietminh, and suffered a setback.
- 1948 - Remained in northern Thailand and in Burma from whence he directed the activities of the Lao Issara bands operating in Laos.
- May 1949 - Removed from the post as Minister of Foreign Affairs and of National Defense.
- 1949 - Openly allied himself with the Viet Minh.
- Late 1949 - Went to North Vietnam to meet with Ho Chi MINH, and remained in central Vietnam.
- Jun 1950 - Returned to Thailand.
- Aug 1950 - Organized the "resistance government of the Lao people".
- Oct 1952 - Participated in the Peace Congress for Asia and the Pacific in Peking.
- Dec 1952 - Participated in the "World Peace Congress" of Vienna.
- 1953 - After the signing of the Geneva Agreements, intervened on several occasions, as Chief and Spokesman of the Pathet Lao, in the Mixed Commission of Khang Kay, of the International Control Commission, and with the co-Presidents of the Geneva Conference.
- Oct 1955 - Signed with KATAY D Sasorith an agreement to cease hostilities in the two provinces of the north.
- Jan 1956 - President of the "Lao Patriotic Front", of the northeastern tribes.
- 1956 - Occupied northeastern provinces of Sam Neua and Phong Saly.
- May 1956 - Proclaimed policy of "Peaceful Neutrality."
- Jul 1956 - Emerged as leader, Laotian Committee for Peace and Neutrality.
- Aug 1956 - Agreed to unified Laos under "Five Principles of Co-Existence."
- Dec 1956 - Signed joint communique with Royal Lao Government prime Minister Prince SOUVANNA PHOUMA announcing agreement on coalition government.
- Nov 1957 - Minister in present newly elected cabinet of the Royal Lao Government.
- 22 Jul 1958 - Ousted from active participation in government with fall of the third SOUVANNA-PHOUMA cabinet.

\*\*\*\*\*

BIOGRAPHIC SKETCH:

NAME: PHOU Sananikone

PRESENT POSITION: Prime Minister

LANGUAGES: French

DATE AND PLACE OF BIRTH: 1905

FAMILY: Brother of NGON Sananikone.

EDUCATION: Educated in Laos.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

RELIGION:

POLITICS: A leader of the Lao Hom Lao ("Rally of the Lao People")

PAST CAREER:

1925 - Entered Government Service as a minor clerk.  
1945 - Held position as Provincial Governor.  
1947 - President of the Laos National Assembly.  
Feb 1950 - President of the Council of Ministers and Minister of National Defense.  
Sep 1951 - Delegate to the Japanese Peace Conference in San Francisco.  
1954 - Delegate to the SEATO Conference in Bangkok.  
Mar 1954 - Deputy Prime Minister, Minister of Interior and Foreign Affairs in the SOUVANNA PHOUMA Cabinet.  
Sep 1954 - Resigned all government positions following the assassination of KOU Vora Vong.  
Nov 1954 - Deputy Prime Minister, Minister of National Defense, and of Veterans of Affairs.  
Mar 1955 - Delegate to the Afro-Asian Conference.  
1955 - Vice President of the Council of Ministers, and Minister of Foreign Affairs.  
May 1955 - Delegate to the Simla Conference.  
Jul 1955 - Substituted for others who were on tours away from the country, as: Prime Minister, Minister of Interior, of Defense, of Commerce and Industry, and of Sports and Youth Affairs.  
Mar 1956 - Attempted to form a new government, but abandoned the attempt after 3 days.  
Mar 1956 - Joined forces with SOUPHANAVONG and PHOLSENA to form the "Lao Union for Public Welfare," with SOUPHANAVONG as President.  
Mar 1956 - Minister of Sports and Youth and Minister of Education, appointed in PHOUMA's newly formed Cabinet.  
1957 - Minister of Foreign Affairs.  
18 Aug 1958 - Formed present government.  
30 Sep 1958 - Signed agreement with US on devaluation of the Kip, arousing hostility of the National Assembly.

\* \* \* \* \*

BIOGRAPHIC SKETCH:

NAME: KATAY Don Sasorith

PRESENT POSITION: Deputy Prime Minister, Minister of the Interior, Minister of Defense.

LANGUAGES: French

DATE AND PLACE OF BIRTH: 12 July 1914, Ban Moung, Bassac Province

FAMILY: Married. Wife - Name Unknown  
Children - unknown

EDUCATION: Studied at the Institute Taberd in Saigon. Degree from Ecole Supérieure de Droit et d'Administration in Hanoi.

RELIGION: Buddhist

POLITICS: Leader of the former Nationalist Party, now a leader of the Lao Hom Lao coalition.

PAST CAREER:

1945 - Went to Thailand after the Japanese seized control of the Laos Government.  
1945 - Joined the Free Laos Cabinet in Thailand and served as Minister of Finance and as head of the propaganda organization.  
Late 1949 - Returned to Laos, joined the personnel bureau of the Office of the French High Commissioner for Indochina, and was stationed in Saigon.  
Aug 1951 - Elected to the Lao National Assembly.



SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

Oct 1951 - Elected President of the National Assembly.  
Nov 1951 - Resigned from the National Assembly and entered the Cabinet as Minister of Finance and National Economy.  
Nov 1951 - Represented Laos as a member of delegations to the Assembly of the French Union.  
1952 - Represented Laos as a member of delegations to the Assembly of the High Council of the French Union.  
1954 - Appointed Prime Minister and concurrently held the positions of Minister of the Interior, Justice, and Social Welfare.  
Feb 1955 - Headed a goodwill mission to Thailand.  
Sep 1955 - Made a friendship visit with Crown Prince SAVANG to India.  
Oct 1955 - Led the delegation to Rangoon for negotiations with the Pathet Lao on political and military settlement.  
Mar 1956 - Resigned as Prime Minister.  
Mar 1956 - Appointed Vice Premier and Minister of State affairs in the newly formed PHOUA Cabinet.  
Apr 1956 - Paid a courtesy call on Prime Minister Field Marshal PHIBUN at the Government House in Bangkok.  
1957 - Appointed Minister of Interior and Public Welfare.  
18 Aug 1958 - (After a year of comparative political activity,) including several trips to France, helped organize the Dao Hom Lao ("Rally of the Lao People") and was given present posts in the PHOUI Sananikone government.

\*\*\*\*\*

BIOGRAPHIC SKETCH:

NAME: LEUAM Insixiengmay

PRESENT POSITION: Minister of Finance

LANGUAGES: Unknown

DATE AND PLACE OF BIRTH: 8 July 1917, Savannakhet

FAMILY: Unknown

EDUCATION: Unknown

RELIGION: Unknown

POLITICS: Member of the Committee for the Defense of National Interests.

PAST CAREER: 1945 - Officer in the French Army.  
Dec 1947 - Minister of Finance.  
Mar 1949 - Minister of Interior and Justice.  
Feb 1950 - Minister of National Economy.  
Nov 1951 - Minister of Health and Social Welfare.  
Mar 1954 - Minister of Finance, Social Welfare.  
Nov 1954 - Minister of Finance.  
Mar 1956 - Minister of Finance, Economy and Planning in the newly formed PHOUA Cabinet.  
1957 - Minister of Finance.  
Jun 1958 - Joined the CDNI  
18 Aug 1958 - Given post in the present government of PHOUI Sananikone.

\*\*\*\*\*

BIOGRAPHIC SKETCH:

NAME: BONG Souvannavong.

PRESENT POSITION: Minister of Education, Minister of Health, Minister of Religion.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

DATE AND PLACE OF BIRTH: 1906, place Unknown

FAMILY: One of six Souvannavong brothers, others being OUDOM, OUROT, OUDAY, OUTHANG, and KHORANHOK

Wife: Unknown  
Children: Unknown

EDUCATION: Graduated from the Ecole Normale Supérieure, Hanoi.

LANGUAGES: French, Vietnamese.

RELIGION: Unknown

POLITICS: A rabid nationalist who followed a pro-Pathet Lao line in the past, BONG is leader of the leftist Lao Rouam Samphan or "Lao National Union" party, with a representation of one in the National Assembly.

- upon graduation from the Ecole Normale Supérieure in Hanoi, entered the field of education.

1947- entered politics:

Dec 47/Mar 49: Minister of National Economy in the second Prince SOUVANNARATH Cabinet.

Dec 1955- elected member of the "People's Council."

Mar 1956- elected President of the Salut Public or "People's Salvation League", a powerful anti-KATAY coalition of the Lao Rouam Samphan with the Independent Party of PHOUI Sananikone, together with elements of the Democratic Party and a sprinkling of KATAY'S own followers. With this bloc, BONG claimed to control 19 out of the then 39 seats in the National Assembly.

Jul 1956- elected Chairman of the Lao Peace and Neutrality Party.

Aug 1956- visited Communist China with Prime Minister Prince SOUVANNAPHOUA.

May 1957- elected President of the National Assembly.

6 Jul 1957- failed to form a new Lao government.

18 Aug 1958- given present posts in the government of PHOUI Sananikone.

\* \* \* \* \*

BIOGRAPHIC SKETCH:

NAME: PHOUMI, Nosavan (Secretary of State - for Defense) (Aug 1959): Due to DOI no other intelligence presently exists.

RANK: Colonel

PRESENT POSITION: Former Commander 2d Military Region.

PAST CAREER: The only regional commander who advocated withdrawal of French advisors. Source said that PHOUMI did not need an advisor for he was the most intelligent of the Lao Regional Commanders. This was not interpreted as an anti-French maneuver, since PHOUMI has the reputation of being pro-French. PHOUMI has not had a long military career but was promoted to Colonel on 1 Nov 1956.

\* \* \* \* \*

BIOGRAPHIC SKETCH:

NAME: INPENG Suryadhay.

PRESENT POSITION: Secretary of State for Justice, concurrently Director of SIDASP (Service Inter-Ministeriel de Documentation et d'Action Sociale et Politique), the Royal Government intelligence agency.

DATE AND PLACE OF BIRTH: Unknown

FAMILY: Son-in-law of KOU Abhay, President of the Royal Council

L-I-2

SECRET

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

WIFE: Unknown.

CHILDREN: Unknown

EDUCATION: Graduated from the Ecole Nationale des Sciences Politiques (University of Paris) in 1953.

RELIGION: Unknown

LANGUAGES: French, some English.

POLITICS: During his student days in France, read great deal on Marxism, had Marxist friends, frequented Marxist circles. His activities in Paris did not go unnoticed by French security officials, who reported his leftist associations to French authorities in Vientiane. These are now believed to have been "youthful indiscretions", and INPENG is assumed to have long ago relinquished his infatuation for Communism. He is presently a member of the steering committee of the Committee for the Defense of National Interests. He has been described as intelligent, active, and articulate.

CAREER:

- formerly First Secretary to the Lao Legation, Washington, D.C.
- 18 Aug 58 - Given present post in the present PHOUI Sananikone government.
- 12 Sep 58 - Named Chairman of the Political Commission of the Committee for the Defense of National Interests and simultaneously given seat on the CDNI Commission on Indoctrination and Training.

\* \* \* \* \*

BIOGRAPHIC SKETCH:

NAME: SISOUK Na Champassak

PRESENT POSITION: Secretary of State for Information.

DATE AND PLACE OF BIRTH: In Mar 56 he was described as "about 27."

FAMILY: A member of the Royal Family of the former Kingdom of Champassak (now southern Laos).

WIFE: Unknown

CHILDREN: Unknown

EDUCATION: Unknown

LANGUAGES: Unknown

RELIGION: Unknown

POLITICS: A member, probably one of the founders, of the Committee for the Defense of National Interests.

CAREER:

- 1956 - Director of the Prime Minister's Secretariat, and President of the "Association of Young Renovators."
- Jun 1958 - Joined the Committee for the Defense of National Interests.
- 18 Aug 1958 - Given present post as Secretary of State for Information in the PHOUI Sananikone government.
- 12 Sep 1958 - Named a key member, along with Brig Gen QUANE Rathikoune and Col OUDONE Sananikone, of the CDNI Political Commission under INPENG Naryadhay.

Comment: SISOUK has been described (Mar 56) as "very intelligent and articulate, and likely to be a future leader of considerable importance."

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

BIOGRAPHIC SKETCH:

NAME: SOUNTHONE Pathammavong

PRESENT POSITION: Chief of the General Staff, Lao Armed Forces.  
Commander-in-Chief, Lao National Army

LANGUAGES:

DATE AND PLACE OF BIRTH:

FAMILY:

EDUCATION:

RELIGION:

POLITICS:

PAST CAREER: 1954 - Commander-in-Chief, Lao National Army  
1955 - Promoted to Brigadier General  
Oct 1955 - Visited Thailand:  
1956 - Armed Forces, Chief of General Staff.  
Feb 1956 - Observer and Head of the Laos Delegation to the SEATO maneuvers near Bangkok.

\* \* \* \* \*

BIOGRAPHIC SKETCH:

NAME: OUANE Rathikoune (also spelled OUAN Ratrikoun)

RANK: Brigadier General

PRESENT POSITION: Chief of Staff, Lao National Army

LANGUAGES: French

DATE AND PLACE OF BIRTH: 1922

FAMILY:

EDUCATION: Attended the French Officers School in Hue.

RELIGION:

POLITICS: One of the leaders of the Committee for the Defense of National Interests.

PAST CAREER: 1941 - Joined the French Army as a private.  
1942 - Won appointment to the French Officers School in Hue.  
1945 - Fought Japanese occupation of Laos as guerrilla leader.  
1945-1949 - Fought against the French return; organized an anti-French guerrilla force.  
1949 - Rallied to the Lao Government; subsequently integrated into Lao National Army  
1953 - Commanded the 1st Lao Infantry Battalion; distinguished himself in the evacuation of Sam Neua; promoted to Major.  
1955 - Commander of the 1st Military Region; organized effective auto-defense resistance movement in his area; promoted to Colonel, 1 August.  
1956 - Appointed Chief of Staff of the Lao National Army (Second to Chief of Armed Forces General Staff).  
1958 - Promoted to Brigadier General before attending Command and General Staff School in US.  
12 Sep 58 - Elected President of the CDNI.

L-1-11

SECRET

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

\*\*\*\*\*

BIOGRAPHIC SKETCH:

NAME: KHAM HOY Boussarath

RANK: Major

PRESENT POSITION: Assistant Chief of Staff, Intelligence, Lao National Army.

LANGUAGES: Thai, Vietnamese, French, some English.

DATE AND PLACE OF BIRTH: Age estimated at 35 years; born in Hanoi.

FAMILY: Married. Wife - Name unknown.  
Children - None.

EDUCATION: Educated in Hanoi. Studied under the then Prof. Vo Nguyen Giap, later Cinc, Vietnam forces.

RELIGION: Buddhist; interested in Catholicism.

POLITICS: Not affiliated with any political parties; "pro-Army."

PAST CAREER: Has had more than 10 years military experience, five of which were in intelligence activities.  
Commanded a French Rifle Company (Caucasian troops) in the Indochina War.  
Trained by the French for Staff Duties and put into the intelligence field by them as a Battalion S-2.

2. ECONOMIC

Sparse population and transportation difficulties due to vast expanses of mountainous and forested terrain have impeded the economic development of Laos. The economy of Laos is primarily agricultural, although forest products are an important export item. 90 percent of the population are associated with these two occupations. There are some tin and salt mines in operation and some undeveloped deposits of copper. A comprehensive mineral survey has not been made in Laos. Sawmills are the only industry of any importance in the country. Economic activity is basically limited to raising rice, coffee, livestock, and tea.

The greatest deterrent to import-export trade is the fact that Laos is landlocked, and has poor transportation facilities. The primary means of access is by ferry across the Mekong into Thailand and rail to Bangkok. The Mekong River through Cambodia and South Vietnam to Saigon affords some economic access, however, the river to the Cambodian border will only accommodate vessels up to 5 feet draft. From there to Saigon there are interruptions by rapids. This landlocked position exposes Laos to political pressures, whereby the trade is subject to foreign taxation and restriction, not to mention added "middleman" costs.

Laos is potentially self-sufficient in foodstuffs, rice being the major crop. However, Laos is dependent on external sources for all manufactured articles, other than the more simple native tools, etc. Skilled technicians are very scarce, despite American efforts to train the Laotians along technological lines.

One financial crisis arose during 1958 caused by the refusal of Government authorities to set a realistic official rate of exchange to the kip. The black market rate allowed businessmen with a much coveted import license to purchase items outside the country for 1/3 less thus allowing a phenomenal profit at the expense of the government treasury. As dollar reserves were depleted the U.S. and French Government were expected to replenish them. Aid was refused until the kip was devalued to a realistic level. The situation reached a low wherein the Armed Forces could not be paid thus causing considerable pressure on both the local government authorities and the U.S. assistance representatives. The resultant devaluation set the rate of exchange at a more realistic level thus reducing the graft and profiteering.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

The Government maintains control of the economy. Internal credit and capital facilities are limited and the economy as a whole is dependent on external assistance for its existence. France and the United States are the principal sources of aid, although the Communist bloc would likely furnish some form of assistance, should they be requested to do so by the Laotians. U.S. aid has been about 48 million dollars per year.

### 3. SOCIOLOGICAL

#### a. Population

Because at least half of its population is composed of savage tribes living in remote, almost inaccessible mountain retreats; no accurate census has ever been taken in Laos. The population is generally accepted at 1,280,000, or an overall density of only 18.4 persons per square mile, the lowest of any Asian nation. ©

The urban population of Laos is less than 12 percent of the total population, of whom almost one third (45,000) is concentrated in Vientiane, the administrative and commercial capital of the country. Of the remaining towns, Savannakhet is the largest, with approximately 15,000 people.

The population, other than the few urban centers, is scattered generally throughout the country, with more densely populated areas along the Thai border and in the northern third of Laos.

#### b. Characteristics of the People

##### (1) General

The population of Laos is composed of approximately 56 percent Laotian Thai, 24 percent Moi, ten percent Thai, and ten percent other smaller ethnic groups. According to their location, these ethnic groups may be divided into three main geographic regions: the Northern Mountains, the Annam Mountains, and the Upper Mekong.

##### (a) People of the Northern Mountains Region

There are three main groups living in this area. Locations of these groups are nearly always consistently orderly according to altitude. The Thai groups (White Thai, Black Thai, Red Thai, and Tho) occupy the lowest areas, large irrigable mountain valleys and basins up to 2,000 feet elevation. Above the Thai villages and fields are those of the Man, located on mountain slopes from 1,000 to 3,000 feet. Above the Man are Meo, who almost never settle at elevations below 3,000 feet and who usually prefer mountain tops and ridges.

##### (b) People of the Annam Mountain Region

This upland region, including not only highlands in southern Laos but also similar regions in central Vietnam and eastern Cambodia, is largely mountainous, with the Annam Mountains in the east and several plateau areas in the west. Most of the area is inhabited by various tribes of the Moi group.

##### (c) People of the Upper Mekong Region

The population of this entire region is scant, being largely concentrated along portions of the Mekong and its tributaries and in the limited number of small plains and basins. The mountain people are sparsely scattered throughout the region.

#### (2) Principal Ethnic Groups

##### (a) Laotian Thai

The most easily recognized characteristic of the Laotian Thai is their location in the valleys of the middle and upper Mekong Valley, its tributary valleys, and adjoining low plateaus. Their villages are often strung continuously along the banks of the rivers; away from the rivers there are fewer villages.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

The Laotian Thai are shorter (their average height is five feet two and one half inches) than the Cambodians to the south. They are carefree, cheerful people, hospitable to strangers and interested in music and art. Their moral code is less strict than that of their fellow Buddhists of Cambodia. Although the men's dress varies from western-style to the sampot of Cambodians, it generally can be distinguished by a scarf, often of blue cotton, worn over the shoulder. The women delight in wearing subtly patterned and gayly colored clothing consisting of a striped skirt, a short vest or jacket, and loose headdress of various coloring depending upon the district. It is the custom of men among certain Laotian Thai groups in Northwestern Laos to tatoo their legs so heavily as to give the appearance that the skin is colored.

(b) Moi

Although the Moi are considered a single ethnic group, they have no unified political or social organization and are the most primitive group in Laos. They are ethnically similar to the Kha of Laos and the primitive tribes of Cambodia. They have local tribal names, which of course are the names they prefer; they regard such terms as "Moi", "Kha", and "Phong" as derogatory. In the Annam Mountain region the best known tribal groups are the Sedang, Rongao, Bahnar, Ma, Stieng, and Mnong.

The Sedang, Rongao, and Bahnar live high in the southern mountains on land suitable only for the most primitive upland rice cultivation. These groups have been known in the past for their brutal and warlike attitude, and it is not considered safe for white men to venture too far among them even today. The Rhado occupy the region of the Darlac plateau and are generally more educated and better off than other Moi tribesmen. The Ma and Stieng are groups living in the southern-most mountains and are the groups most affected by neighboring Cambodian and Vietnamese cultures. Ma and Stieng areas are not considered as safe for Laotians as the more remote areas to the north. West of the Rhado are the Mnong, who are less subject to lowland influences although they live in areas considerably lower. The Moi are of Indonesian stock, with medium builds, long heads, flat noses, and straight or slightly wavy hair. They seldom have beards or mustaches, and their most obvious recognition characteristics are the absence of upper incisor and canine teeth (broken, sawed, or filed out of Moi jaws at puberty) and the distortion of Moi earlobes by bone or ivory plugs or heavy brass rings.

The costume of the Moi is distinguished by its poverty. It is usually reduced to a minimum and often consists of only a loincloth or small apron. Some of the Moi women have adopted long skirts, and some of the men in the more advanced groups wear short blue jackets. Turbans are the usual headdress. A recognition talisman used by the Moi consists of a copper bracelet with open ends, which carries temporary tribal protection.

(c) Thai

The mountain valleys are inhabited by tribal Thai in both the eastern and western regions of Laos. The Thai make up three-quarters of the population of the Northern Mountain Region, and they consist of three main groups: Tho, Black Thai, and White Thai. Although they have been divided into many subgroups, exhibiting differences in language, custom and dress, all have been strongly influenced by the Vietnamese.

The tribal Thai generally occupy lowland areas or valley bottoms up to 1,000 feet elevation, but there are some differences in the general locations of the three main groups. The White Thai generally occupy, along with the Red Thai, the larger valleys such as that of the Red River and the Black River and some of the valleys west of the Red River Delta. The Tho generally occupy the lower mountain valleys north and northwest of the Red River. The Black Thai live at high elevations, especially in the northeastern part of the Northern Mountains regions, where they live much like the Meo or the Man mountain groups.

(3) Smaller Ethnic Groups

The smaller Ethnic groups in Laos include: the Man, Meo, Kha, Lolo (Ho, Lolo of Laos), the Akha (ko), the Hak-ka, Laqua, Lati, Kalao, and the Chinese.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

(a) Man

The Man (preferably called "Min", "Kim-mien", or "Yao") are mountain tribes that, for the most part, occupy small separated areas in the mountains north of the Tonkin Delta. There are a few tribes, however, in Northwestern Laos. One of the chief Man concentrations is in the Bac Lac region near the Kwangsi border. The Man, in general, are intelligent and hospitable.

(b) Meo

The Meo (preferably called "Mung" or "Mong") locate their villages and their cultivated fields in the most isolated and highest mountains, almost always above 3,000 feet elevation. A distinctive feature of the Meo country is steep mountain sides profusely covered with an extremely coarse grass which is interspersed with an occasional thorny shrub.

The Meo have traditionally avoided contact with other tribal groups. Notwithstanding their suspicion and distrust of the "plains people" and their desire for isolation, the Meo have been known to treat hospitably, strangers whom they regard as friendly.

(c) Kha

The recognition characteristics of the Kha are subject to some variations, depending upon their degree of contact with other more culturally aggressive groups. They are racially the same as the Moi, Annam, and Kui of Cambodia. The various Kha tribes of the Upper Mekong Region generally can be recognized by the location of their settlements at intermediate elevations between the lowland dwelling and the Meo of the high mountains.

(d) Lolo

The Lolo form a considerable hill-group in the southwestern provinces of China, but in Indochina they are spread only thinly along the highlands bordering the boundary zone with Burma and Yunnan. They occupy more area in Northern Laos than they do east of the Red River. The Lolos living in Laos occupy the hill slopes not far from the rice fields.

Isolated Lolo (Ho) are to be found in Kha and Thai villages, where they make and sell alcohol and opium. The Lolo of Laos are gradually losing the cultural characteristics of their more numerous brethren in Yunnan and adopting the customs and beliefs of the Meo, Man, and Thai in the midst of whom they live.

(e) Akha (ko)

The Akha are a hill-dwelling group in the extreme northern and northwestern sections of Laos bordering on Southern Yunnan and the Kengtung Shan Saly. The Akha speak a Tibeto-Burman language, related to Lolo.

(f) Hak-ka and Laqua, Lati, and Kelao

Mention is made of these tribal groups only because there might still be a few in Northwestern Laos, the number being very small. They are all hill-dwelling groups most likely to be found in North Vietnam and South China, (where Hak-ka are fairly numerous.) Very little information is available concerning these tribal groups.

(g) Chinese

In Laos the Chinese constitute approximately seven percent of the total population. They have gravitated toward the urban areas, especially since the Japanese surrender of 1945. During 1946-48 there was a decided immigration to Laos. As in other Southeast Asian countries, the legal status and citizenship of these "overseas" Chinese is a point of considerable controversy. The literacy rate in Laos is probably lower than for other Southeast Asian Chinese.

c. Religion

The animistic basis of the religion in Laos remains intact. The Laotians still practice worship of their ancestors and spirits or phi. The Laotians say that some people



SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

possessed by an evil spirit, or a "phy pop," can cause sickness or death by a look or a bit of magic. Some practices of sacrifice, divination, and curing are carried out by local shamans. Sometimes the local monks themselves are shamans, but in any case they do not strongly discourage belief in spirits.

Buddhism has long been the state religion, and its clergy has been organized in a hierarchy paralleling that of government administration. Buddhism has undergone a veritable renaissance in Laos. When looking at this as a national movement, one must emphasize the fact that the Royal Government is actively supporting Buddhism and helping to spread its teachings throughout the country. Mixed with the basic Buddhist religion, however, there is a combination of vague Taoist and Confucian beliefs.

Buddhism is, aside from nationalism, the sole important positive force around which opposition to Communism can be built in most of Southeast Asia. The Laotian is not primarily an economic creature. His spiritualism runs deep. He opposes war because it is based on greed and therefore evil. He believes in a life that transcends the human span, a life that is only real when spiritual, a life that is free, a life based not on force from without but self-discipline. Such an ideal aim tends to make the Buddhists passive and reluctant to fight outsiders, but it also makes them aware of the threat to their freedom Communism brings with its conquest of their homeland.

d. Education and Public Information

The vast majority (approximately 90 percent) of the peoples of Laos are illiterate and uninformed, and have little comprehension of world affairs or the dangers of Communist imperialism. Nearly half of the population consists of primitive mountain tribes. There are only a few primary schools, and these are very small. There are virtually no secondary schools except for religious institutions discussed above. Of the small educated class, many study abroad, especially in France, and, in the case of the Communists, in China and/or the Soviet Union. What education the primitive tribal groups get consists of propaganda and some informational guidance by the USIS and other public information services.

The Ministry of Education has expanded its activities considerably in recent years and is beginning to agitate for government funds earmarked especially for improved educational institutions. Laos has its own national information service under the Ministry of Information, but it functions on an extremely small scale. There are no daily Lao language newspapers and very few periodicals. The national broadcasting service consists of a single one-kilowatt transmitter. Because public information media are so limited in scope, censorship is at a minimum.

In the whole country, one of the greatest needs is for trained and educated men and women to help develop people able to govern themselves. The needs are vocational education, professional education, technical education, adult education, community schools, and school construction (repair and reconstruction of war damaged and destroyed schools).

e. Manpower

The manpower potential in relation to the total population probably represents no more than 350,000 males between the ages of 15 and 50, of whom only 170,000 are considered fit for military service. The great majority (90 percent) of the labor force is devoted to agriculture, most of it primitive in nature, and is directed toward producing only what is required for subsistence of the immediate group involved. The limited employment of Lao labor in crafts and semi-technical fields is restricted to the few urban centers, and most of that is concentrated in Vientiane. By far the greatest proportion of individuals serving in technical or even semi-technical profession and trades are foreigners, including Europeans, Chinese, Vietnamese, and Thais from other countries. Even the servants for the elite class are generally not of native origin if their employment involves the slightest technical background. Labor relations and problems as envisioned in other countries simply do not exist here, or are simply arrangements which concern operations of foreign enterprises of little concern to the Lao, since he rarely participates as a laborer. Control of labor within communities for essential projects is merely another matter to be handled by the local administrative authority of the Royal Government and will probably remain so until the other facets of Lao society demand otherwise.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

## I. Health and Sanitation

### (1) Public Health Organization

Prior to 1945 the Laotian health service was directed by French officials headed by a Director of Health. In each province European doctors were charged with maintenance of public health, and four other European doctors directed the government laboratories and mobile health units. Under these European official doctors, "Indo-chinese doctors" performed the bulk of the actual duties. Public health services suffered disruption at the end of World War II, but the Franco-Laotian modus vivendi of 1946 provided for their reorganization under a Ministry of Public Health located at Vientiane. The Ministry was actually established in 1948. Later, by a convention appended to the Franco-Laotian Agreements of 1949-50, all responsibilities for public health and sanitation were transferred from French to Laotian officials.

As in most of the necessary steps taken in assuming the responsibilities of independence, it was the evident intent of the western-educated, French-guided framers of the new Laotian governmental system to establish, in form at least, a reasonably complete public health system on the French model, and to insure as far as possible the benefits of the work the French had already done in that field. Filling the posts created and replacing the French incumbents with qualified Laotian personnel was impossible. Consequently, numbers of French doctors and public health administrators were retained as advisers to the new Laotian officials, though far from enough to staff even the key posts in hospitals and other installations. This situation and the fact that reliable statistics on numbers and qualifications of personnel do not exist make it difficult to assess the efficiency of the Laotian public health service as other than low, by western standards, though there is earnest striving to improve it.

### (2) Level of Medical Skills

Among the qualified doctors now practicing medicine in Laos, only one Laotian, the Minister of Health, has received a western medical degree (he studied in France). There are still a few French or other foreign doctors in Laos, but the majority of the country's "doctors" have obtained licenses to practice by passing a state examination based on knowledge equivalent to a high school education and only two years study at a western-supervised medical school. This examination may be passed by persons who acquired their knowledge by apprenticeship to a practicing doctor or, as in the case of the present doctor to the King, by training as a nurse.

These "Indochinese doctors," as they are called, receive a degree only as "medical Assistants" or "Public Health Assistants," but the Laotians accept them as doctors. They staff virtually all the hospitals and public health services or engage in lucrative private practices in the urban centers. Only a few services are still directed by French personnel.

When Laos became independent in 1953, there was only one medical school for all of "Indochina." It had branches at Hanoi and at Saigon. Laotians were reluctant to go to the Hanoi Medical School because of their strong dislike for the Vietnamese people.

Consequently the opening of new medical training facilities in Saigon did little to relieve the shortage of doctors. More recently, however, a four-year School of Public Health, which opened in Phnom Penh, Cambodia, appears to have provided a possible solution. The new medical school established early in 1956 in the same city should also further the training of Lao doctors. All Laotians in training at Saigon voluntarily transferred to Phnom Penh, where they need not compete with the more aggressive Vietnamese and where they can associate with the more congenial Cambodians.

Similarly, there are very few fully trained Laotian nurses, pharmacists, laboratory technicians, or midwives. Most of the health services are performed by subprofessional personnel. (In 1953 there were only six fully trained midwives in all Laos; the number of nurses is uncertain.) A partially trained nurse may be the health educator and chief infirmary nurse of an entire province, which also may have only "rural" midwives with six months of training or less.

### (3) Sanitation

The Laotians are by preference a clean people. They bathe frequently, using a harsh, locally made soap, but they do so in contaminated water which often infects them with various diseases. The sanitation standards of many hill people, especially the Kha, are particularly poor.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

Poor sanitation ranks high among the major health problems of Laos. Only a few major centers and villages have a sanitary water supply, and still fewer have running water. Most of the villages draw water for all purposes from the rivers and streams in the rainy season and from unsanitary open wells in the dry season. Until sanitary wells can be introduced for year-round use, control of water-borne infections is impossible.

Another very serious sanitation problem is the poor disposal of human waste, an important cause of water pollution and parasite infection. Both sexes are very casual about their toilet habits. Even the cities have no sewage disposal plants. Such waste is not generally used as fertilizer as it is in China and Vietnam. In most regions no pit-prives are used, and the common practice is either surface defecation or the "cat hole" method. In the latter case a person digs a small hole into which he defecates, covering up the waste with a thin layer of dirt. "Cat hole" disposal is a greater breeder of parasites than is surface disposal. Hook-worm eggs thrive in the moist earth, and worm parasites have been known to work their way up through as much as 30 inches of loose soil.

Poor food-handling techniques and poor eating habits are a source of many infections. No protection is provided against flies and other insects that abound, no refrigeration is available, and no system of food preservation is practiced except pickling, drying, or smoking. The habit of eating raw pork and raw fish causes many parasite infections.

Meals are customarily served in a common bowl set on the floor mat, around which the entire family sits; all dip their hands into the bowl. Hands are usually washed before and after eating, but the water used is often not sanitary. Chopsticks are used by many mountain Tai tribes and by some other hill people of relatively recent migration from China.

Laotian and foreign health officials are attempting to improve both urban and rural sanitation, although there is much apathy and ignorance to be overcome. It is difficult to persuade the Laotian that he should take active measures to improve his material environment. His religious scale of values directs him away from concern with the material world. Villagers are hard to convince that their age-old preference for taking water from a running stream causes some of their ailments. It may be possible, by playing up the general Laotian preference for burying their human waste, to convert them from "cat-hole" disposal to use of deeper sanitary pit-prives, but it will be a long time before fundamental foodhandling and eating habits can be altered.

#### (4) Diseases

The greatest single problem in Laos is malaria, despite the extensive house spraying and other anti-malaria work that has been underway for years. It is of incalculable cost to the country in suffering, loss of life, and working energy.

Other diseases of greatest significance to the people of Laos are as follows: venereal diseases, trachoma, and a wide variety of intestinal parasites. Tuberculosis is also prevalent throughout the country. Approximately 50 percent of the infants die in the first year of life.

#### g. Public Welfare

Because the ethnic groups inhabiting Laos are extremely varied, the veritable mosaic of groups, subgroups, and tribes vary somewhat in their standards of living. But they all have one thing in common: a very primitive, isolated, rugged and simple way of life. Communication between the mountain tribes is usually by trail, and many tribes live as far as two weeks from the nearest radio receiver. Lowland groups may utilize very primitive roads during some months of the year.

In general each family supports itself through its cultivation and home industries; spinning, weaving, making of clothing, basketry, and the milling of rice with foot-powered pounders. Outside the largest administrative centers like Vientiane, where public buildings and residences for foreigners are built, there are almost no special craftsmen, and very few persons are employed by others.

Continuous foreign contact occurs only in the administrative centers, like Vientiane, where the inhabitants are primarily Lao rather than tribal.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

L-II CHARACTERISTICS OF THE AREA

1. MILITARY GEOGRAPHY

- a. Terrain
- b. Climate and Weather
- c. Ports and Naval Facilities
- d. Air Facilities
- e. Urban Areas

2. TRANSPORTATION AND COMMUNICATIONS

- a. General
- b. Roads
- c. Railroads
- d. Inland Waterways
- e. Telecommunications
- f. Civil Air
- g. Logistics

DOI up to February 1959

except where noted

1. MILITARY GEOGRAPHY

a. Terrain

(1) Relief (See Enclosures (30, 35) Graphic Section)

(a) Northern Highlands

The northeast-southeast trending mountains and hills of northern Laos are west of the main drainage divide in Northern Indochina. This divide separates streams discharging into the Mekong River and those flowing into the Gulf of Tonkin. This highland is heavily dissected by numerous streams and consists mainly of sharp-crested ridges and narrow, steep-sided valleys. There are narrow belts of hills in the area south of Luang Prabang. Southeast of Luang Prabang is a 2,000 square mile area of lower relief, the Plateau du Tran Ninh. The major valleys normally parallel the northeast-southwest trend of the ranges. In places, rivers, chiefly the Mekong and Man Hou, flow in narrow gorges 2,000 to 4,000 feet deep.

Summit elevations are generally between 3,000 and 6,000 feet above sea level. The highest peak in the western sector, 9,242 feet above sea level, is south of the Plateau du Tran Ninh. Slopes are commonly greater than 30 percent throughout the Highland.

The Plateau du Tran Ninh is enclosed by mountains which tower above the plateau surface. In the western part of the plateau, the surface is predominantly hilly, but the remainder is mainly level to rolling. The general elevation of the plateau is 3,600 feet above sea level in the level to rolling part and 4,000 to 4,500 in the hilly sections. Streams radiate from the Plateau du Tran Ninh and flow in narrow valleys; the valleys generally are not deeply entrenched in the level to rolling parts, although in places they are as much as 150 feet below the general surface level. Valleys are deep and steep-sided (slopes commonly greater than 30 percent) in the hilly sections in the west and in places at the eastern margin of the plateau; hills rise abruptly 300 to 900 feet above the floors of these valleys.

There are few natural or developed routes through the northeast-southeast trending mountains and hills of northern Laos. Valleys of the major rivers are too narrow and steep-sided in most places to afford overland routes through the mountains; transportation among settlements on the major rivers is predominantly by water. Most of the routes, mainly trails, follow valleys of small tributaries of the Mekong, cross spurs, or follow along the crests of ridges. The major developed routes are an east-west road across the Plateau du Tran Ninh and a north-south road between Luang Prabang and Vientiane. The east-west road extends from Phu Dien Chau (18° 59'N, 105° 37'E) on the Gulf of Tonkin to the north-south road. These roads generally follow small tributary streams but they also follow ridge crests and in places extend across passes.

(b) Chaine Annamitique

The Chaine Annamitique, the longest mountain range in former French Indochina, trends northwest-southeast between the Plateau du Tran Ninh in central Laos, past the southern extremity of the Laotian-South Vietnamese border. It forms a major highland barrier 60 to 150 miles wide between the narrow plains along the eastern coast of Vietnam and the extensive Mekong lowland to the west.

The range is comprised of many relief types. Mountains predominate in the portion of the range within Laos, but hills and rolling hilly plateaus are also common. A rugged limestone area, ten to twenty miles wide, extends east-west across the northern part of the highland east of Thakhek (17° 24'N, 104° 48'E). North of this limestone area the range is characterized by long, narrow, sharp-crested ridges and narrow valleys which generally trend northwest-southeast. South of the limestone area the mountains and hills are more heavily dissected than those to the north and consist mainly of peaks and short ridges with diverse orientations.

The mountainous areas of the Chaine Annamitique have slopes commonly greater than 30 percent and local relief (difference between highest and lowest elevations within a horizontal distance of one mile) is generally greater than 1,500 feet; local relief is as much as 2,500 feet where the mountains rise abruptly. Summit elevations are predominantly between 4,500 and 7,500 feet above sea level. The highest peak in the Chaine Annamitique, 9,059 feet above sea level, is on the border between Laos and North Vietnam. Mountain passes in the

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

Chaine Annamitique are 1,300 feet above sea level or higher.

Small areas of hills are scattered throughout the Chaine Annamitique; they are most extensive on the western margins of the highland. Summits are predominantly between 1,000 and 3,200 feet above sea level. Slopes are generally between five and 20 percent but in places they exceed twenty five percent. North of the Plateau du Cammon the hills commonly rise about 1,000 feet above adjacent valley floors; in the central part of the Chaine Annamitique, narrow, sharp-crested ridges project 300 to 600 feet above the valley floors.

Plateaus comprise a large part of the Chaine Annamitique. The only large plateaus in Laos are the hilly to level Plateau du Cammon and the rolling Plateau des Bolovens. Both of these plateaus terminate abruptly in steep escarpments on the eastern or southern edges.

(c) Mekong Lowland

The Mekong lowland occupies a narrow belt along the Thailand border in southern Laos (as well as nearly all of Cambodia). It is bordered on the north by the mountains of the Northern highlands and on the east by the mountains, hills, and plateaus of the Chaine Annamitique. From the plain at Vientiane the lowland extends southward along the Mekong. The width of the lowland in Laos varies from a few miles to 80 miles.

A short gap, three to six miles wide, connects the broad plain south of Pakse with the generally narrow plain in Laos along the Mekong. This predominantly level to gently rolling plain lies between the Mekong -- which separates it from the similar but more extensive area in Thailand -- and the bordering mountains and hills of the highlands to the north and east. The width of the plain varies; in the two broadest sections, east of Savannakhet (16° 32'N, 104° 48'E) and north of Vientiane, it has maximum widths of 80 to 50 miles, respectively. In the narrow central part between Thakhek (17° 24'N, 104° 43'E) and Pak Sane, the plain is four to 12 miles wide; the narrowest part is a 50 mile long section west of Pak Sane, which has an average width of two miles.

Most of this narrow, forested plain is between 500 to 600 feet above sea level. The surface is nearly level along the Mekong, but toward the highlands generally increases in ruggedness and is rolling to hilly. Hills and low mountains are scattered throughout parts of the plain and are especially numerous in the narrow section between Thakhek and Pak Sane. The plain is crossed by numerous tributaries of the Mekong. On the plain south of the Se Bang Fai (17° 04'N, 104° 55'E) the Mekong and its tributaries generally are entrenched about 100 feet below the level of the interstream areas; north of the Se Bang Fai Stream channels are shallow and bordered by natural levees, which are too low to prevent flooding of the adjacent plain.

Between the Mekong delta and Pakse the Mekong lowland in Laos is a level to rolling plain, which decreases in elevation as it approaches the Cambodian border.

(d) Chaine des Dangrek

The Chaine des Dangrek is a hilly, densely forested highland, two to six miles wide, which extends along part of the southwestern border of Laos. It trends north-south for about 80 miles in Laos and continues for 100 miles in Thailand.

In most places the highland consists of a main ridge and low spurs which extend westward from it. The western side of the main ridge and its spurs have gentle slopes, and merge gradually with the large plateau in eastern Thailand. The eastern side, however, is characterized by a steep escarpment, which rises abruptly 600 to 1,500 feet above the gently rolling plain to the south and east. Numerous short streams, which drain the eastern side, are deeply entrenched in the escarpment face. Low saddles are common in the main ridge.

Summit elevations in the Chaine des Dangrek are predominantly between 1,300 and 1,800 feet above sea level; the highest peak, 4,602 feet above sea level, is in the ridge west of Bassac (14° 53'N, 105° 52'E).

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS.

(2) Drainage Characteristics

The Mekong River drains all of Laos with the exception of the province of Sam Neua and parts of the provinces of Phong Saly and Xieng Khouang. The small area in northern Laos not drained by the Mekong falls on the eastern slope of the Chaine Annamitique and is drained principally by the Song Chu, Song Ma, Nam Het, Song Ca, Nam Mo, and Nam Meuk, all smaller rivers that flow to the Gulf of Tonkin.

In mountainous northern Laos the Mekong follows a circuitous course through narrow, steep-sided valleys. Although the average gradient of the Mekong throughout its 2,600 mile course in China and former Indochina is only 1.6 feet per mile, in most of Laos the gradient is much steeper, and many rapids have developed. In southern Laos the Mekong is mainly a lowland river, with a meandering or braided channel and a gradient of less than one foot per mile. Natural levees border the Mekong in much of the lowland section. These present steep faces toward the river, but slope almost imperceptibly away from it.

The major tributaries of the Mekong in Laos from north to south are: Nam Pha, Nam Tha, Nam Beng, Nam Hou, Nam Suong, Nam Khan, Nam Ngum, Nam Nhiep, Nam Sane, Nam Theun, Se Bang Fai, Se Bang Hieng, Se Done, and Se Khong. All are east bank tributaries, mainly because the Mekong forms the western Laotian boundary with Burma for 150 miles and with Thailand for 835 miles. The Mekong does, however, receive important tributaries on the west bank, across from Laos, which drain parts of Burma, Thailand, and Cambodia. Wherever the Mekong forms the border between Laos and Thailand the international boundary runs along the west bank, thus assuring that all of the numerous islands in the channel belong to Laos.

The entire course of the Mekong, and the lowland sections of the major tributaries of the Mekong, are unfordable barriers throughout the year; during the high water period many smaller streams also become unfordable. The barrier effect of the major rivers is accentuated by the lack of bridges. The Mekong is unbridged throughout its course in Laos, and there are few bridges over its major tributaries. Ferries are the most widely used method of crossing streams. Most ferries are small, primitive native craft, but at stream crossings on important land routes ferries are commonly larger and more modern. Access to ford and ferry sites is difficult in many places. In the mountains, access to streams is restricted by steep, rocky banks; in the lowlands, access to many streams and canals is limited by adjoining marshes and swamps.

Water transportation is used extensively throughout the Mekong Basin. Many sections of the Mekong between Phnom Penh and Vientiane are navigable by river steamers, but portage and transshipment are necessitated around the Chutes de Khone (13°56'N, 105°56'E) throughout the year and around several other rapids during low water. Shallow-draft native vessels regularly use many of the mountain streams despite the swift currents and numerous rapids.

The rivers of Laos that empty into the Gulf of Tonkin flow across the coastal basin of North Vietnam, except for the Nam Meuk in Phong Saly province, which merges with the Red River drainage system. Generally speaking, the coastal rivers flow swiftly in narrow mountain valleys for approximately the upper two thirds of their courses. In the lower third of their courses they tend to meander sluggishly across the narrow coastal lowlands. The courses of the streams in the mountains are characterized by steep and irregular gradients, many rapids and falls, and predominantly rocky bottoms. In the lowlands the courses have gentle gradients and silty or sandy banks and bottoms. In most cases the upper two thirds of the streams are in Laos. High water on these coastal streams occurs in early May through October; the rest of the year is a low water period. Mean high water discharges are approximately 20 times greater than mean low water discharges. During flash floods the discharge may be two or three times as great as at mean high water. Flash floods are common during the high water period on all streams of the coastal area because of the steep slopes and heavy precipitation in the headwater areas.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

(3) Vegetation

(a) Dense Evergreen Forest

The vegetation of Laos can be divided into five types. Of these types, the dense evergreen forest covers more area than all the other types together. Most of the dense forests have been greatly altered by slash and burn cultivation (ray cultivation). Early in the dry season small plots, usually less than one acre in size, are cleared in the forests. The largest trees are left standing although they may be killed during the clearing or by fire when the debris is burned late in the dry season. At the beginning of the rainy season these fields are planted with corn or non-irrigated rice. Crops are grown on these plots for one to three years before the soil fertility is depleted or the fields are completely over-run with weeds. The land is then abandoned to the native vegetation, which initially appears as grass, bamboo, or a dense growth of shrubs. Later, quick-growing, soft-wooded tree species appear. Once these plots are cleared, many years pass before the forest is reproduced. After 20 to 40 years the land may be cleared and cultivated again.

Dense forests are extensive at elevations up to 3,000 feet above sea level. At higher elevations they occur in valleys separated by pine-covered ridges and hills. About 90 percent of these evergreen forests are secondary, as a result of indiscriminate cutting for timber and firewood and clearing for temporary cropland. In the secondary forests, tree crowns intermingle to form an extremely dense canopy 75 to 90 feet high. The larger trees, mostly soft-wooded, fast-growing, broad-leaved species having little commercial value, develop trunks which are 2.5 to 3.5 feet in diameter, and are clear of branches for 35 to 60 feet from the ground. Many species have large buttresses, which extend in all directions from the lower five to eight feet of the trunk to a distance of 8 to 12 feet from the base of the tree, and gradually merge with the shallow roots. An understory of smaller trees occurs among the larger species. The trees in this understory may grow in several distinct layers of height, or may form a continuous mass extending from just below the canopy to the ground. Their trunks and branches are commonly covered with a dense growth of ferns, orchids, and other plants. Large woody vines with stems one to eight inches in diameter climb up the trees and become interwoven in the canopy. The continuity of the forest canopy is broken by many cultivated clearings and by abandoned fields reverting to forest.

The secondary growth is a dense, tangled, almost impenetrable mass of small trees, less than ten feet high, intermingled with a profuse growth of palms, bananas, tree ferns, thorny shrubs, vines, and bamboos. Along streams and in other low, wet places where there are few trees, the plants of the undergrowth become more luxuriant.

Virgin evergreen forests are present only in forest reservations and uninhabited areas. In contrast to trees of the secondary forests, trees of the virgin evergreen forests, many of which are of great commercial value, commonly reach a height of 90 to 125 feet. The smaller trees of the understory completely fill the spaces between the larger species, and little light reaches the carpet of low ferns and herbaceous plants which cover the forest floor. In the evergreen forests, leeches and mosquitoes are extremely abundant, especially during the rainy season.

Pine and oak forests predominate in limited areas at elevations greater than 3,000 feet on the plateaus and mountains. Pure stands of pine are most typical of rolling plateaus which have rainfall. In these forests the trees are commonly 30 to 40 feet high, with trunks 4 to 12 inches in diameter. The trees generally are well separated with the crowns 10 to 20 feet apart; however, some grow close together forming a continuous canopy. These forests are interrupted in many places by areas of grass with widely scattered trees.

(b) Small Cultivated Fields, etc.

In moist areas and in areas of low population density in Laos, where slash and burn cultivation has not been intense, forests have been allowed to develop again before the land is re-used. There are fields in every stage of recovery; over wide areas in this country the vegetation appears as a mosaic of small cultivated fields and small areas of grass, scrub, bamboo, and forest in various stages of growth. The woody growth in this mosaic pattern is commonly evergreen. This mosaic is widespread in Laos.



SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

The fields may remain covered by grass or scrub for years after being abandoned, but, unless eroded or again cultivated, they eventually return to forest. In this mosaic pattern, many ridges, hilltops, and steep slopes are barren or have a few clumps of grass; scrub or forest vegetation grows on the less steep slopes and in the valleys. In many parts of the hilly or mountainous regions 30 percent to 40 percent of the landscape is barren.

(c) Savanna and Grassland

A small area south and northeast of Vientiane, and several small areas in the extreme southern areas of Laos in the Mekong lowlands, are characterized by savanna and grassland. These areas are typically level or slightly rolling. They constitute an important source for timber because access is easy. Associated with them are fairly large quantities of timbers 40 to 50 feet long and about three feet in diameter. Good forage is abundant early in the rainy season; at other times the quality is poor. Intense grass fires are common during the dry season.

(d) Marsh

Although marshes are rare in Laos (compared to South Vietnam and Cambodia) they do occur in southern Laos in the Mekong lowland. These marshes are dominated by a continuous growth of sharp-bladed rushes, grasses, and reeds, three to seven feet high. The growth is green from early May through late October. During the dry season the vegetation dries and becomes brown or yellow, and many marshes are subject to rapid conflagration.

(e) Riceland

Rice cultivation is much less extensive in Laos than in other countries of southeast Asia. Areas devoted to growing rice (except for non-irrigated rice) are confined to the Mekong lowland, from Vientiane to the Laotian-Cambodian border.

Rice is grown on valley bottoms in other sections. The rice fields are irregularly shaped, one tenth of one acre in size; they are enclosed by dikes 12 to 18 inches high and one to two feet wide, which serve to retain rain water.

In these rice fields small clusters of four to five plants from seed beds are commonly set ten to 15 inches apart in ankle-deep mud covered by four to 12 inches of water. The fields generally remain covered by at least six inches of water until two to six weeks before harvest, except during seasons when water is scarce. By harvest time the fields are usually dry. Where two crops of rice are grown, fields are under water for most of the year.

Early in the growing season the landscape in these rice areas is covered by a thin sheet of water interrupted only by dikes and the villages on higher ground. As the rice plants develop, the landscape becomes a bright green which turns to golden brown as the rice matures. About one month before harvest the crop forms a dense, continuous grassy growth two to four feet high. At harvest the upper 12 inches of the stalk is removed with the grain, and the remainder is left in the field to be burned. During the dry season the barren, uncultivated rice fields are dry, and the surface is baked hard. In some areas dry season crops are grown following the rice harvest.

b. Climate and Weather

(1) General

Laos, lying almost entirely in the tropical zone of the Northern Hemisphere, is subject to the seasonal influences of the Pacific Ocean trade winds and the Asiatic monsoon structure. The result is a climate having two main seasons, each with well distinguished characteristics. One season, that of the northeast monsoon, occurs generally from October through March, while the other, the southwest monsoon, occurs from June to September. Short transitional periods separate these seasons.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

With respect to moisture, the climate of Laos can be classed as humid to excessively wet; with respect to temperature, a great part of the country is distinctly tropical in nature. The northeastern portion of the country is semi-tropical because of the relatively cool winters, and certain regions of high terrain may be considered to have a warm temperate climate. During certain times of the year, military operations on the ground may be hindered by the heavy precipitation, occasional floods, and poor trafficability. At these times extensive cloudiness occurs over a large part of the country. Although these clouds greatly restrict opportunities to maintain high and medium-level aerial operations which require visual reference to the ground, accompanying ceilings and visibilities are frequently sufficiently good to permit landing, take-off, and operations which can be maintained under or in the low clouds. At other times of the year relatively fair, dry weather prevails over major parts of the country, presenting favorable conditions for many operations.

During the winter monsoon, Laos, separated from the cloudy domain to the east by the Chaine Annamitique, has its dry season, with comparatively fair weather. During the summer period conditions are nearly the reverse. Very heavy precipitation, with much cloud cover, prevails. Rainfall is particularly heavy along the southwestern slopes of the Chaine Annamitique.

Rather variable weather occurs during the transitional periods of spring and autumn, during which the northern part of the country is primarily affected by winter-type conditions, while summer-type conditions prevail in the south. During these months the seasonal influences are not well developed; consequently, comparatively clear, fair weather occasionally encompasses the entire country, in contrast to the remainder of the year, when rather consistently cloudy, rainy weather generally prevails. At this time the diffuse intertropical convergence zone can be expected to lie over Laos, with very changeable weather prevailing.

The climate of any area is essentially governed by the physical location of the area with respect to latitude, terrain features both within and surrounding the area, the major centers of action of the atmosphere, and large land or water areas in the vicinity. Thus Laos and neighboring areas are influenced by three subtropical semi-permanent high-pressure cells, i.e., one in the North Pacific Ocean, one in the South Pacific Ocean, and one in the Indian Ocean. A fourth center of action, effective in winter only, is the high-pressure cell of interior Asia, whose summer counterpart is a low-pressure cell in the vicinity of the northern Bay of Bengal and Burma.

The climate of Laos is not amenable to treatment according to the usual four seasons of nearly equal length. For most purposes the following seasons will be defined and used: (1) the winter monsoon, November through March; (2) the spring transition, April and May; (3) the summer monsoon, June to early September; and (4) the autumn transition, late September and October. In individual years the times when the seasons change may vary somewhat.

Since no upper-air temperatures have been compiled for Laos, it is necessary to estimate these temperatures by considering data from surrounding areas, such as Hong Kong, Singapore, and Central India. The following can be considered an approximation only:

Distribution of Mean Upper-Air Temperatures Over Laos

<u>Ht. in ft.</u>	<u>Range of temp/ in degrees C.</u>
10,000	12 to 08
15,000	04 to -02
20,000	-07 to -08
25,000	-16 to -19
30,000	-26 to -30
60,000	-60 to -70

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

The mean height of the freezing level usually ranges from about 15,000 feet from December to April to about 16,000 feet in July and August. Danger of icing exists throughout a layer about 7,000 feet thick above the freezing level. The freezing level may drop to 8,000 feet in January, but subfreezing temperatures are probably rare below 15,000 feet in July and August.

(2) Relative Humidity

The rather high relative humidities that generally prevail in Laos cause conditions favorable for the formation of mildew, corrosion, and decay of susceptible items, and, especially when associated with high temperatures, cause an enervating climate. The annual variation is slight, with mean relative humidity (expressed in percent) ranging generally from the seventies in the dry season to the high eighties and nineties in the wet season. Relative humidities below 70 percent occur most frequently during the winter monsoon season. Relative humidities above 90 percent occur most frequently during the spring transition and early part of the summer monsoon.

(3) Precipitation

Practically all of the precipitation in Laos occurs as rain. Snow is seldom observed, but has been known to occur at several locations. Only in the north at elevations above 5,000 feet has it been observed more than once or twice in the entire series of recorded observations. Hail occurs rather rarely, but the probability of hail occurring may be important in the mountainous regions.

(4) Clouds

The variations in cloudiness are closely allied to those of precipitation and consequently follow generally the seasonal variation of precipitation. During the winter monsoon rather scant cloudiness, compared to the east coast of Indochina, prevails west of the Chaîne Annamitique, and a condition of nearly clear skies occurs frequently. Cloud bases usually range between 1,000 and 3,000 feet above the surface. A great variation in the amount and diurnal variation of cloudiness below 3,000 feet also occurs in Laos. Localized ceilings below 1,000 feet may occur frequently at 0600 LST, but such low ceilings are rare after 1000 LST.

Most of Laos is exposed to the southwest monsoon of summer and has a high degree of cloudiness from May to October. Within the region of extensive cloudiness mornings are characterized by stratified clouds at medium altitudes. These develop into extensive cumulus and cumulo-nimbus during the afternoon, cloud bases generally occurring from 1,000 to 3,000 feet above the surface. These clouds contain, as a rule, heavy showers and thunderstorms. During October, cloudiness decreases rapidly.

(5) Visibility

Visibility in Laos is generally good, exceeding six miles more than half the time at 1300 LST. Local low visibility for a few hours near dawn is rather common, especially in winter. Principal factors which reduce visibility are fog, haze, drizzle, the heavy rains of summer, and smoke from brush fires. During the winter monsoon good visibility prevails. Dense early morning fog generally dissipates around 1000 or 1100 LST. In the Mekong Valley from Savannakhet northward, these morning fogs are frequent but not dense and dissipate rapidly after sunrise, with visibility becoming good at about 0800 or 0900 LST or sometimes later. Haze occurs rather frequently from January through April. Drizzle, although observed in Tonkin and the Northern Annam Coast from the end of October to February, rarely is present in Laos itself. In those areas in which it occurs, drizzle is more effective in reducing visibility than is fog. Brush fires are frequent from January through April on the high plateaus. The smoke that results reduces visibility to altitudes of 3,000 to 5,000 feet over vast areas. Dispersed smoke is one of the causes of dense haze observed during these months.

During the summer monsoon the torrential rains are the principal factor acting to reduce visibility. In that season the zones of abundant and frequent precipitation are the zones of poorest visibility. In general, low visibility is confined to those times and locations where rain is falling at the moment, and good visibility prevails in the surrounding rain-free air. Morning fogs may be frequent in the high regions and valleys, but they are not dense and dissipate rapidly after sunrise.

(6) Winds

(a) Surface - In general mean wind velocities are rather low over most of Laos, although moderate winds occur in some regions of high elevations. Mean wind speeds are generally low in the early morning. Afternoon wind speeds, with the exception of only a few locations, exceed those of the morning. The high plateaus have marked local winds, which are drier than the monsoon winds at lower ground elevations. Foehn winds, hot, dry, and sometimes strong, appear along the east coast of Vietnam between 12-18 degrees north latitude in summer. These winds, known as the "winds of Laos", originate on the high plateaus of Laos and Annam and cause extreme drying as they blow downslope along the eastern watershed of the Chaine Annamitique.

The annual variation in mean wind speed is generally rather small compared to the diurnal variation and does not show consistent trends. The few instances of high wind velocities which occur are generally associated with localized squalls of thunderstorms, with a duration of only an hour or two. Typhoons, which frequently assault the Vietnamese coast from July through November, rarely cross the Chaine Annamitique to Laos.

During the winter monsoon wind direction over Laos is east to west. During the summer monsoon the direction is reversed. Recorded mean wind velocities vary from 1 to 15 knots during the winter monsoon and 0.5 to 10 knots during the summer monsoon.

(b) Aloft - Since available upper-wind data are obtained from visual observations of pilot balloons, they furnish a very incomplete sample of wind conditions above 5,000 feet. At higher levels the data are biased in favor of wind conditions which prevail, with scant cloud cover and relatively low wind speeds. This bias may be strong above 10,000 feet, and its nature cannot be completely specified.

Wind speeds aloft range between four and 29 knots most of the time at all levels, and velocities of four to 16 knots are observed more than half the time. More frequent instances of high wind velocities aloft probably occur, but are not recorded due to the deficiencies in the observational techniques used. During each season strong winds tend most frequently to have the same directions as the prevailing winds. This conclusion also may be partly a result of the poor sample available for analysis.

During the winter quarter the north to east winds characteristic of the winter monsoon are present from the surface to about 5,000 feet, the upper limit extending to slightly above this value in December but decreasing gradually to lower values by late February. At higher levels westerly winds predominate farther south, becoming southerly at about 30,000 feet. Above 10,000 feet wind speeds over 17 knots are more frequent during this quarter than during the rest of the year. Over Tonkin, wind speeds of 30 to 42 knots occur more than half the time near 30,000 feet.

The spring quarter experiences a rather gradual transition from winter to summer conditions. Southwest to west winds prevail at all levels north of 15 degrees north latitude, with easterly winds at all levels of the south. Over Tonkin, wind speeds greater than 17 knots are more frequent at this time than at other times of the year.

West to southwest winds prevail over Indochina below 15,000 feet in the summer quarter, and wind directions over Tonkin are rather variable at this time. Within these westerlies, wind velocities greater than 17 knots occur in central and southern Indochina more frequently than at other times of the year. Above 25,000 feet, easterly winds predominate.

The autumn quarter is a period of transition. During September conditions similar to those found in summer prevail. In early October the low-level easterly winds typical of the winter monsoon become established in the north, extending to about 10,000 feet, and by late November conditions similar to those in the winter quarter prevail. For the autumn quarter general wind directions above 10,000 feet are variable north of 15 degrees north, while easterly winds prevail to the south.

c. Ports and Naval Facilities

The principal ports of Laos, which has no seacoast, are along the Mekong River. The most important is Vientiane, the capital and most important trade center of Laos. A small river boat squadron is based here, with detachments also at Savannakhet and Pakse. Water access to the sea is along the Mekong River, through the territory of two other countries, Cambodia and South Vietnam.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

e. Urban Areas

(1) General

The period of French administration had a marked effect on the nature of urban development in Laos as well as in Indochina as a whole. New cities were built, and in many, new residential and commercial sections were created and old sections partly modernized. As a result, urban areas of any significance became Europeanized to some extent in layout, architecture, and facilities. There was also a change in the basic functions of major urban areas: the colonial government created new seats of administration and new military centers, which soon outranked in importance the former centers of native administration and trade. However, in recent times, with the gradual decline of colonialism, the old native administrative centers have tended to resume their former importance.

The social organization of Laos has been, and remains, basically rural. At the same time, there has been a slow but long-continuing growth in the number and size of populated places having true urban characteristics. This growth began with the establishment by the French of administrative centers, and received impetus from the rise of a native middle class anxious to acquire urban property. More recently the trend toward urbanization has been accentuated by the movement of peasants into the cities for security, and by the creation of a new class of native government officials. It is likely that the general trend toward urbanization will continue into the future.

The cities and towns of Laos are inhabited by peoples who derive their culture from the countries to the west, and show architectural and layout characteristics similar to those of urban areas in Thailand.

(2) Principal Urban Areas

The urban areas of Laos are more in the nature of towns and villages than cities, as we usually think of them. For this reason, information on urban areas is extremely limited, and only three "cities" are treated in detail.

(a) Vientiane (17-58N, 102-36E) See Encls (32, 33) Graphic Section

1. Significance. Vientiane, the capital of Laos, was the former residence of the French Commissioner. As the seat of the new independent government, Vientiane is known as the "administrative" capital, the site of all central government offices and the city where the parliament convenes. Thus Vientiane is the "modern" capital, as distinguished from the traditional or "royal" capital of Luang Prabang.

2. Description. Vientiane, on the north bank of the Mekong River, is at the uppermost tip of the Mekong lowland. The population is estimated at 68,000, but in occidental terms it is probably best compared to a small town in the United States some fifty years ago--when electricity had just been brought in, some streets were being paved, and the town was beginning to style itself a city. At present there is much building activity. Roads are being improved and whole neighborhoods are being changed. Originally, the central part of town was attractively laid out and there are still many tree-lined streets. The general air, however, is one of untidiness, and there are few central streets uncluttered by the paraphernalia of construction.

3. Utilities and Public Services. If such modern conveniences as electricity and inside plumbing are not entirely new to Vientiane, during the French regime they were available only on a limited scale to the privileged few. The present expansion severely taxes the city lighting system, which is still confined largely to the central part of town. There is no city sewage system, very little street lighting, and no city-wide water supply. A privileged minority within the town have city water, unfiltered and straight from the Mekong, piped into individual reservoirs whence it is pumped up into the house tanks. The rest of the people depend for water during the dry season on the uncertain arrival of a city water truck which fills their barrels.

The non-Lao population of Vientiane, comprising virtually the whole business community among other things, is made up largely of Vietnamese, Chinese, Thai, and a few Indians. There are still a number of French, and approximately 200 Americans, almost all U.S. Governmental personnel (with a sprinkling of businessmen and two Protestant missionary families).

L-II-27

SECRET

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

4. Transportation and Communication. Despite improvement, most of the main streets in Vientiane are only semi-paved, often in bad condition, crumbling at the edges and potholed in the middle. There is, however, a constant if half-hearted effort at repair. The fact that many intersecting streets and new areas are unpaved (and consequently dusty or muddy, according to the season) adds to the general untidiness. There are few sidewalks, which makes walking in town something of an adventure. There is no public transportation system in Vientiane. Approximately 20 taxi-cabs are available for long distance (over three miles) travel. Bicycles and pedicabs are the rule. Traffic proceeds on the right-hand side of the street.

Vientiane has approximately 100 telephones, mainly in local and foreign Government offices. Telephone facilities are poor, but with persistence and time, a call can eventually be completed.

For further information on transportation and communication facilities connecting Vientiane with the rest of Laos and with other countries see the section on Transportation and Communications.

5. Sanitation and Health Controls. Sanitation in Vientiane is comparable to any other tropical Asian town. USOM programs for malaria and parasite controls are in effect. However, because of inadequate medical, nursing, hospital, and public health facilities, Laos has all the diseases endemic to the area. Health controls in Vientiane are adequate to keep down epidemics. A large uncontrolled canine population produced a rabies epidemic in 1951. The city has a hospital staffed with French military doctors which has a capacity of 300 beds.

(b) Luang Prabang (19-52N, 102-08E) (See Encl (25) Graphic Section)

For centuries Luang Prabang was the capital of a great kingdom covering much of Laos and some of Thailand. Today it is the capital of Luang Prabang province and the residence of the King of Laos. It is a pleasant little city, having the royal palace in its center and a number of picturesque shrines nearby. The population is about 20,000. At the head of Mekong River navigation, the city is the market center of northern Laos and has a small trade in rice, silk, and a wide variety of timbers, gums, resins, and other forest products.

The city is 110 miles north of Vientiane, and is easily reached by air during the dry season. A connecting road between Luang Prabang and Vientiane is being improved.

(c) Pakse (15-07N, 105-47E) (See Encl(26,34) Graphic Section)

The city of Pakse is a provincial capital in Southern Laos with an estimated population of 15,000. It is a control point for highway traffic between Laos and Thailand which moves by ferry across the Mekong River. A French-managed tin mine nearby provides the principle industrial enterprise. Pakse is also the market for a rich food-growing area, the Bolovens Plateau.

(d) Savannakhet (16-33N, 108-44E)

Savannakhet is the capital of Savannakhet Province (8,400 sq. mi.: 1947 population 194,000) and is a port city located on the east bank of the Mekong River opposite Mukdahan, Thailand.

Seno airfield, 15 nautical miles ENE of Savannakhet, is the second most important airfield in Laos and is capable of supporting medium transports, light bombers, and jet fighter aircraft.

1. Transportation.

Water: Savannakhet is 672 miles above the mouths of the Mekong River which empties into the South China Sea just SW of Saigon, S. Vietnam. Due to rapids, the river south of Savannakhet is navigable only by craft drawing 2.5 - 3 feet or less. Above the rapids, river transportation centered on Savannakhet is conducted by a fleet of launches, tugs, and lighters, providing some scheduled passenger and freight service.

Road: Savannakhet is serviced by a highway from Dongha, Vietnam. Seno airfield is served by Federal Proste, a hard-surfaced road.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

Rail: The nearest known RR connection is at Ubon, Thailand about 85 nautical miles south across the Mekong River.

2. Public Utilities. There are no public electrical, water, or sewage systems.

(e) Thakhek (17-24N, 104-49E)

(Source: Columbia Lippincott Gazetteer of the World, Columbia University Press, New York 1952.)

Thakhek is the capital of Khammouani (or Cammon) Province (10,200 sq. mi.; 1947 population 104,000) and is located on the east bank of the Mekong River opposite Nakhon Phanom, Thailand, and 140 mi. ESE of Vientiane.

1. Transportation.

Water: Mekong River, shallow draft vessels only.

Rail: None.

Road: Linked with Vihn Vietnam.

## 2. TRANSPORTATION AND COMMUNICATIONS

### a. General

In the present state of economy, the movement of goods within Laos does not demand a highly developed transportation system. Throughout the centuries the natural waterways--the Mekong and its tributaries--supplemented by the trails and cart tracks sufficed. The French brought some engineering improvements to navigation and began to build a road system. This, however, was done less to promote internal trade than for military and political reasons and to remedy the isolation of Laos from its neighbor states of Indochina. The war years, the Viet Minh troubles, and the consequent recession of French influence have contributed to the deterioration of both types of improvement, and reconstruction is far from complete. There has never been a rail system. Air transport facilities of a rudimentary sort exist, and are useful for shipping goods and doing government business. There is more movement by air, however, into and out of the country than within it.

### b. Roads (DOI June 1958 except where noted)

#### (1) Introduction (See Encls (28, 29,30) Graphic Section)

Information contained in this report has been compiled from source's personal observation and experience of travel over roads in Laos during the period of two years between April 1956 and June 1958. The roads described in this report are the only roads in Laos that can be travelled by jeep, regardless of what other roads may be shown on existing maps.

Due to complete absence of railroads and the difficulties of navigating rivers in Laos, roads are the principal means of surface transportation. This report describes all types of roads in Laos, but deals primarily with principal rural routes. These routes form the basis for comparatively rapid troop and supply movements, and are the links that connect the major important portions of Laos.

#### (2) Road Classification

##### (a) Hard-surface and/or partially paved roads

The number of this type of road is extremely limited. Although these roads are often referred to as highways, they have no resemblance to major American highways, and should rather be called secondary roads. Their use is limited to passenger vehicles, jeeps, 3/4 ton trucks, and in some instances to 2 1/2 ton trucks. Some portions of these roads are paved with

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

macadam, but are heavily pitted because of inadequate drainage and soil erosion. Bridges along this type of road are usually of wooden structure, but there are a few old steel bridges which have been reconditioned and are in fairly good shape.

(b) Dirt roads useable throughout the year

This type of road can be found throughout Laos, but their number and use is very limited. These roads are usually surfaced with clay or dirt and in a few instances with crushed rocks. Their condition is usually good and at times excellent; some portions of these roads have deep holes and ruts, but are nevertheless useable throughout the year. Bridges along this type of road are mostly of temporary wooden construction, and many of them are quite rickety. Some of them will, at a great risk, support 2 1/2 ton trucks, but can definitely not be considered safe, and should be avoided if a ford can be used instead. In some places along these roads, bridges have not yet been rebuilt, but at some of the larger river crossings the Lao National Army (ANL) is operating pontoon ferries.

(c) Dirt roads useable during the dry season only

This type of road can be found throughout Laos, and although some of them are in fairly good condition, the lack of bridges and ferries prohibits the use of them during the rainy season. Also, their surface is mostly soft dirt and clay which becomes a quagmire during the rains. During the dry season these roads may be used by jeeps, 3/4 ton trucks, and even 2 1/2 ton trucks with four wheel drive. There are a few temporary type wooden bridges along these roads, but all of them are in very poor condition and cannot be trusted to support even a jeep. However there are usually fords in the immediate vicinity of such bridges, which can be used during the dry season.

(d) Trails and mountain paths useable throughout the year but on horseback or on foot only

There are thousands of kilometers of this type of trails throughout Laos, but it is almost impossible to give their exact location and distances covered. Some of these trails are fairly permanent and are used constantly by the local population. These trails connect villages and settlements and are mostly used by local traders. Some trails may start out as clearly defined roads, but after several kilometers deteriorate into obscure trails that seemingly lead nowhere in particular. Even Army personnel, permanently stationed in certain locations use local guides to find their way from village to village. There are several mountain paths that cross into China and North Vietnam; they are usually well known to the local population, but are very difficult to locate on a map due to insufficient information.

(3) Urban and Suburban Roads in Laos

(a) Urban roads

There are four cities in Laos which have paved asphalt and macadam roads. The largest city is VIENTIANE, the capital of Laos, which has a fairly well paved street system. Most streets are asphalt, frequently patched with tar. The other three cities are: LUANG PRABANG, SAVANNAKHET, and PAKSE. THAKHEK also has a couple of paved streets, but they are merely extensions of highways passing through the town.

(b) Suburban roads

The only roads in Laos that would fit this description are a few around VIENTIANE. One fairly well paved road, approximately four miles long, leads from VIENTIANE to the airport west of the city, and continues on for approximately 2-4 miles more thence deteriorating into a dirt trail, impassable during the rainy season. This same road passes through VIENTIANE due east to CHINAIMO, a distance of approximately four miles. From VIENTIANE to CHINAIMO the road is in extremely poor condition, with deep potholes, and completely crumbled edges along the entire four miles, which results in great traffic difficulties for the heavy truck traffic that uses this road. From CHINAIMO this road continues about 10 miles to THADEUA, but about two miles past CHINAIMO the road widens considerably and becomes a well paved macadam road. At THADEUA the road ends. THADEUA is the entry port for all goods that come across the Mekong River from NONG-KHAI, Thailand, and the road connecting THADEUA with VIENTIANE has the heaviest traffic density of any in Laos. The portion of the road from CHINAIMO to THADEUA was rebuilt in 1956-



SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

1957 with ICA aid program funds and has since been maintained in fairly good condition. The trip from VIENTIANE to LUANG PRABANG can be made by passenger vehicle or by jeep in approximately 12-14 hours during the dry season, but takes much longer during the rainy season because of the slippery condition of the road between VANG VIENG and LUANG PRABANG.

From VIENTIANE to PAK SANE, a distance of about 109 miles, the road is considered very poor. There are two (2) ferry sites along this route, one is pontoon and powered by a Johnson outboard motor. There are twelve (12) bridges, three of which are considered safe for a jeep (4 x 4). All are narrow and in poor condition. It is advised that heavier equipment be sent by barge along the Mekong River. (DOI May 1959)

From PAK SANE the road continues to THAKHEK, a distance of approximately 112 miles. This portion of the road is dirt surfaced and it passes through low marshlands and crosses many small streams. It is in very poor condition and not useable during the rainy season. Jeeps and 3/4 ton trucks are known to have traveled this portion of the road during the rainy season, but they encountered difficulties and were sometimes marooned in the woods for several days and even weeks. Passenger vehicles, jeeps, and 3/4 ton trucks can travel this road during the dry season, but should travel in convoys of at least two or three vehicles, one of which should be equipped with a winch. The trip from Pak Sane to Thakhek takes approximately 6-8 hours during the dry season, and during the rainy season it may take as long as two days or more following a particularly heavy rainfall.

From Thakhek the road continues approximately 62 miles to Seno. The first stretch of this road, about 34 miles, is paved with macadam and in good condition. All bridges along this road are in fair to good condition, and will accommodate passenger vehicles, jeeps, and 3/4 and 2 1/2 ton trucks throughout the year. It takes approximately 6-8 hours to travel from Seno to Pakse.

From Pakse the route continues to the south, bypassing Phiafay, to Khong, thence across the Lao-Cambodian border and on to Saigon. The distance from Pakse to the Lao-Cambodian border is approximately 103 miles. It reportedly is in good condition and apparently can accommodate passenger vehicles, jeeps, and 3/4 and 2 1/2 ton trucks throughout the year.

(b) Route Nationale #10

This road extends directly north from Vientiane, joining Route Nationale #13 approximately 43 miles from Vientiane. However, this road is only used up to the Ngam Nhun River, approximately 19 miles from Vientiane, where a ferry crosses the river. The road beyond this point is not useable during the rainy season, but during the dry season some jeeps and some small pickup trucks use this road for local deliveries of merchandise.

(c) Route Nationale #7

This road branches off Route Nationale #13 at Sala Pou Khoun and extends east to Moung Sui, thence to Plaine de Jarres, Phonsavan, Ban Ban, and ends at Nong Het, from where a trail continues for approximately 9 miles to the Laos-Vietnam Border. The total distance from Sala Pou Khoun to Moung Sui is about 62 miles. The road is clay and dirt surfaced and useable by all types of vehicles including 2 1/2 ton trucks during the dry season. During the rainy season the road is very dangerous because it becomes very slippery in places where the road skirts steep mountain gorges. Jeeps traverse this road occasionally during dry weather. From Moung Sui to Plaine de Jarres, about 31 miles, the road is considerably wider and better, but is still unuseable during the rainy season because of the lack of bridges. In 1953 all the bridges along this portion of the road were being reconstructed. Whether or not they have been completed is unknown at the present time.

From Plaine de Jarres to Phon Savan, 6 miles, the road is in good condition and useable throughout the year by all types of vehicles.

From Phon Savan to Ban Ban, approximately 37 miles, the road condition is in fairly good condition, but it cannot be used during the rainy season because of lack of bridges across three very swift and deep streams. During the dry season these rivers can be forded, but during the rainy season they are absolutely impassable even for jeeps. During the dry season it takes half an hour to travel from Plaine de Jarres to Phon Savan, about two hours from Phon Savan to Ban Ban, and about four to six hours from Ban Ban to Nong Het.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

(d) Route Nationale #4

One section of Nationale #4 is a 9 mile long dirt road that extends from Luang Prabang to the village of Ban Thine, west northwest of Luang Prabang. It can only be travelled by jeep during the dry season. This section passes through Luang Prabang and continues south southwest for approximately 34 miles to Ban Na Fai. It is a dirt surfaced road and in poor condition; useable by jeeps during the dry season only. From Ban Na Fai the road becomes a trail and continues about 7 miles to Ban Pak San on the bank of the Mekong. This portion of the road can only be travelled on foot or on horseback, but some jeeps have attempted this short trip during the dry season and have succeeded in reaching the village.

The other section of Nationale #4 starts at Plaine de Jarres and extends approximately 19 miles southeast to Xieng Khouang. This section is surfaced with crushed rocks and dirt, and is in very good condition. It was completely rebuilt in 1957-1958 with ICA Aid funds and will accommodate vehicles of all types, including 2 1/2 ton trucks.

(e) Route Nationale #12

This major road starts at Thakhek and extends east. The first 31 miles of this road are surfaced with crushed rock and dirt, and are in good condition. This portion of the road can be used throughout the year by all types of vehicles, including 2 1/2 ton trucks. At the 31 mile point the road bifurcates. One short branch of 7 miles extends to Mahaxay, and, although in very poor condition, it can be used by all types of vehicles throughout the year. The other branch, which is the continuation of Route Nationale #12, is a soft dirt road. Approximately 1 mile past the fork, this road crosses a side section, about 1/2 mile, of low land, which is inundated during the rainy season and becomes a fairly deep swift running stream. Over this stream the ANL operates a hand drawn pontoon ferry, which can accommodate three jeeps simultaneously or one 2 1/2 ton truck. The section of Route Nationale #12 between the first bifurcation and the place where it forks again is about 12 miles long and can be used by jeeps and 3/4 and 2 1/2 ton trucks throughout the year, but might be unuseable for several days after a particularly heavy rainfall. At the second fork Route Nationale #12 continues east for approximately 19 miles to Ban Nang Phao, where it deteriorates into an unuseable dirt road.

(f) Route Nationale #8

Route Nationale #8 starts at the second fork of Route Nationale #12 and extends north about one mile to Khommarath. At this village the road crosses a deep ravine with a very swift running stream. The bridge across this ravine is extremely rickety and will not support anything heavier than a jeep. The ANL started construction of a new wooden bridge at this point in 1958, but it is not known whether the bridge has been completed. Approximately 2-4 miles past this bridge Route Nationale #8 becomes a very narrow and dangerous mountain road with deep ruts and big boulders strewn along the way. This portion of the road is strictly one way, crossing many deep gorges and ravines over rotten and unsafe log bridges, with sheer drops of several hundred feet on both sides of the bridges. In other places the road clings to mountain sides with no room for two vehicles to pass. After the road reaches the plateau it becomes a little wider and is in better condition. It passes through Ban Na Kay and crosses the Nam Theun at Ban Nam Theun over a pontoon ferry. The distance between Khommarath and Ban Nam Theun is approximately 37 miles and will accommodate jeeps and 3/4 ton trucks during the dry season only. From Ban Nam Theun the road extends north for approximately 43 miles to Lak Sao. It is a dirt surfaced road and in fairly good condition. At Lak Sao the road splits into two roads; one, in extremely poor condition, extending west about 22 miles to Kam Keut; the other road in fair condition extending east, about 12 miles, to Nape.

Before the Viet-Minh invasion during the French Indochina war, Route Nationale #8 was an excellent highway that connected Thakhek with Vinh in Vietnam. However, since the war, the road has deteriorated seriously, all the bridges were destroyed, and the road has not been maintained. The 2-4 mile stretch of road between Nape and the Laos-Vietnam border is now only a barely visible dirt trail. Reports from the local population indicate that the road begins again 1-3 miles on the Vietnam side of the border and continues to Vinh, but no definite information is available. Route Nationale #8 in its entirety, from Khommarath to Nape, is useable by jeeps and 3/4 ton trucks only during the dry season. It takes approximately 8-10 hours to travel from Khommarath to Nape over this route.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

(g) Route Nationale #9

This route starts at Savannakhet and extends east to Seno, where it crosses Route Nationale #13. The road is paved with macadam and is in excellent condition. The 28 mile distance to Seno can be traveled in one hour. The road is useable throughout the year by all types of vehicles. From Seno the road extends east, passing through Dong Hene, Moung Phine, and Tchepone. The 105 miles distance between Seno to Tchepone can be traveled in about 6 hours during the dry season and in about 9-10 hours during the rainy season. The road has a dirt surface and is in fair to good condition. Bridges along this road are all in fair condition and will accommodate all vehicles including 2 1/2 ton trucks throughout the year.

(h) Route Nationale #23

This road branches off Route Nationale #9 at Moung Phine and extends south to Ban That Hai, a distance of approximately 19-25 miles. From there the road extends about 50 miles to Saravane. The entire road is in extremely poor condition and reputed to be useable by jeep during the dry season only.

(5) Other Routes

(a) A branch of Route Nationale #13 starts at Khong Sedone and extends approximately 47 miles east to Saravane. It is a dirt road, in poor condition, and can be used by jeeps and 3/4 ton trucks throughout the year. However, it is not useable after a particularly heavy rainfall.

(b) Another branch of Route Nationale #13 starts at Pakse and extends approximately 25 miles east to Paksong. This portion of the road is paved and in excellent condition. At Paksong the road becomes dirt and clay surfaced and turns north approximately 22 miles to Ban Thateng, thence an additional 19 miles to Saravane. This road is useable throughout the year by jeeps and 3/4 and 2 1/2 ton trucks. However, after a very heavy rainfall the portion between Ban Thateng and Saravane becomes extremely slippery and because of the steep hills is not useable by heavy trucks.

(c) At Ban Thateng an additional road begins, extending first east for approximately 19 miles and then south approximately 47 miles to Attapeu. This is Route Nationale #16. The road is dirt and clay surfaced and is useable by jeeps and 3/4 ton trucks during the dry season only. From Attapeu the road continues for an additional 16 miles to Ban Hat Nhao. Between Ban Hat Nhao and Attapeu the road is useable throughout the year by jeeps.

(6) Conclusions

(a) Road travel in Laos is time consuming and very hard on all types of vehicles. Gasoline dumps are practically non-existent except in some of the larger military installations, and those have only a very limited supply of gasoline, perhaps sufficient for a one or two day operation.

(b) During the dry season, small military units and small amounts of supplies can be transported over all roads described in this report. But during the rainy season most of these roads will not support heavily loaded trucks. Presently, most of the ANL supplies are transported by air, and river transport along the Mekong River. Individuals and small units like squads are also transported by air. However, larger units, like platoons and up, have to walk to their destinations.

(c) In general it can be said that the roads in Laos are far below standards and are hopelessly inadequate for troop and supply movements except over short distances.

c. Railroads

(1) General

Laos has no railroad lines within the country. However, the country is, in effect, served by the Thai railroad system as the principal means of import. The route is from Bangkok to Nong Khai, Thailand, by rail, thence by ferry across the Mekong River, and thence by motor vehicle 12 miles northwest to Vientiane. The motor ferry operating over the Mekong has a

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

capacity of 17 jeeps or four 2 1/2 ton trucks. Although capable of efficient operation it has suffered some difficulties. The Lao-Thai Company is responsible for operating the ferry. The Express Transportation Bureau is in charge of transporting goods from the railroad to Vientiane.

d. Inland Waterways

(1) General

The inland waterways system of Laos is dominated by the Mekong River and its tributaries. The Mekong flows south from the mountain range of Thanglha Ri in the province of Tsinghai, China. It forms a part of the western Indochinese border, between Burma and Laos and between Thailand and Laos, before emptying into the South China Sea just south of Saigon. It has an overall length of about 2,600 miles and is navigable throughout most of the section from the mouth to Luang Prabang, a distance of 1,248 miles. In comparison, the Mississippi River is about 2,475 miles in length and has a navigable length of about 1,960 miles. However, the importance of the Mekong is severely limited by the numerous rapids and waterfalls, which for all practical purposes preclude uninterrupted navigation from the mouth to the head of navigation.

Most of the cargo carried on the Mekong system is transported in native craft. These craft are generally propelled by poling, tidal currents, or winds. These primitive methods, plus the extensive use of unskilled native labor in loading or discharging, result in a low level of efficiency as compared with operative methods known to the western world. However, large quantities of cargo are transported on the Mekong in Laos each year.

(2) Principal Inland Waterway--The Mekong System

(a) General (See Encl (31) Graphic Section)

The Mekong is of greater value as an irrigator than as a means of communication, because numerous rapids and seasonal variances in water depths obstruct and restrict the course of the river, especially above Vientiane. In the middle and upper reaches of the Mekong there are numerous tributaries, in which navigation is mainly limited to native craft.

The Indochinese Mekong may be divided into three sections: (1) the Lower Mekong, about 440 miles long, extending from its mouth on the South China Sea to the Chutes de Poppeng (Khone Rapids) near the Laos-Cambodian border; (2) the Middle Mekong, about 540 miles long, extending from the Chutes de Poppeng to Vientiane; and (3) the Upper Mekong, about 560 miles long, from Vientiane to the Burmese border. In this section the Middle and Upper Mekong will be considered.

(b) Physical Characteristics

The Middle Mekong is separated from the Lower Mekong by the Chutes de Poppeng, a 4.5-mile rocky barrier lying across the Mekong. The river at the falls has an extreme width of about seven miles and a fall of 50 feet. For practical purposes it may be considered that these rapids cannot be navigated; empty craft and small tugs, however, have circumvented the barrier by ascending Houei Sadam, an eight mile branch of the river. Prior to World War II, transshipment and portage at this point was accomplished over a narrow-gage (2.6-foot) railway, but during Thailand's occupation of this area (1941-1946) some of the railway installations were destroyed. The falls are now bypassed by a 17 mile-long highway which joins Veun Kham, a village at the lower end of the Chutes de Poppeng, with Ban Hat Sai Khoun, a small settlement a few miles above the falls.

Upstream from the Chutes de Poppeng the river continues northward to Pakse. This reach is navigable at all times by vessels drawing up to five feet. Vessels on this route average 5.5 days per round trip.

Above Pakse, the river has many rapids and is difficult to navigate. This rocky stretch, known as the Kemmarat Rapids, continues upstream for about 100 miles. Throughout this obstruction the river has an uneven bottom and flows between sandstone banks as close as 350 feet. This narrow passage can cause a sudden rise in water level as much as 100 feet and currents up to 11 mph. Steam launches, which are designed for passenger traffic and can transport only 15 to 40 tons of freight, can navigate this section during high water (15 July to 15

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

November). These craft have a draft of about three feet and are capable of making 12 knots. At low water (February through April) through-navigation over this reach is not possible, and at least one transshipment is necessary. The bypassing of this reach of the river may be accomplished by highway transport over a 150 mile road to Savannakhet on the Mekong. This method is practiced during all seasons and requires approximately two days traveling time.

From Savannakhet to Vientiane navigation is easy during the season of high water; during low water the controlling depth in this reach is about five feet, limiting vessels to a draft of four feet. Several rapids are encountered in this section, including the Keng Kabao and the Don Kasek. One report states that the Keng Kabao Rapids have a controlling depth of about three feet at low water.

Barges of local pontoon design are in operation between Vientiane and Savannakhet throughout the year. It is locally considered the best means of transportation between the two cities. LCM's can operate along this route as well.

Upstream from Vientiane the river is known as the Upper Mekong. In the section from Vientiane to Luang Prabang navigation is confined to small (15-ton), readily maneuverable vessels of a special design with drafts of about 20 inches. Above Luang Prabang navigation is extremely limited because of numerous rapids. During the highwater season some navigation by very shallow-draft vessels is possible to the Burmese border.

Tributaries of the Mekong in Laos are of minor importance. The Se Khong empties into the Mekong at Stung Treng, Cambodia. Because of conflicting information it is not possible to determine the navigable length of this river; however, it is believed that navigation is possible throughout the year for about 25 miles above Stung Treng by vessels drawing up to five feet, and for greater distances by piroques.

The Se Done joins the Mekong at Pakse. As far as Ban Samia, 73 miles upstream, vessels drawing no more than 2.5 feet may navigate. Sampans may ascend the Se Done to Ban Nong Boua, an additional 40 miles.

The Se Bung Hieng joins the Mekong at Kemmarat. From there to Tchepone, 179 miles upstream, the river averages about 300 feet in width and is navigable from July through November by vessels drawing five feet. During low water the maximum draft is about 2.5 feet. Rapids are numerous on this river. The Se Nam Nok and the Se Pone, which extend northwest and east respectively from Tchepone, are navigable for further distances at high water by vessels drawing up to five feet.

The Se Bang Fai joins the Mekong at Ban Pakse. From there to Ban Bang, 41 miles upstream, the river has an average width of 500 feet and is navigable from July to November by vessels drawing five feet. Sampans may ascend the river for an additional 126 miles to Ban Nha Vet.

The Nam Sane enters the Mekong at Pak Sane. For 48 miles to Ban Kin Sout the river averages about 300 feet in width. It is navigable from June through October by craft drawing five feet. Sampans may ascend the river for an additional 25 miles to Tha Thom.

The Nam Whiep joins the Mekong at Pak Sane, a few miles upstream from the juncture of the Nam Sane and the Mekong. For 14 miles to Muong Mai the width averages 300 feet wide and is navigable during the high water season for vessels drawing five feet. Sampans may navigate this section throughout the year.

The Nam Ngum flows into the Mekong at Ban Pak Ngum. For 110 miles to Ban Thin Keo the river is about 200 feet wide and is navigable during high water by vessels drawing less than five feet. During low water it is navigable by sampans. The Nam Lik, which has its confluence with the Nam Ngum, is navigable by vessels drawing less than five feet to Ban Muong Fuong, a distance of about 45 miles.

The Nam Hou empties into the Mekong about 18 miles above Luang Prabang. It is navigable during all seasons by fairly large piroques for a distance of about 150 miles; smaller piroques, carrying about three tenths of a deadweight ton, can navigate an additional 110 miles at Hat Sa at all times except during the highest flood stage of the river.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

(c) Equipment

Small native craft used on the Mekong system, piroques and sampans, range up to about 10 tons in carrying capacity. Only a few of the larger piroques are motor driven, and the crews, according to the size of the craft, range up to four men. A few steamers and launches are also used on the Mekong as far north as Pakse. These have a cargo capacity of 15 to 45 tons. From Savannakhet to Vientiane besides native craft several diesel and steam vessels are in operation, with cargo capacities of 30 to 160 tons.

(d) Locks

Available information does not indicate the presence of locks on the Mekong or its tributaries.

(e) Bridge crossings

No highway bridges across the Mekong River in Laos. There are two highway bridges across the Se Bang Hieng near Ban Tha Phe, the other near Tchepone. Both these bridges consist of steel truss spans and are about 810 and 550 feet in length, respectively. Of the other tributaries, none of the sections described above is bridged.

(f) High and Low Water Periods

High water, which accompanies the southwest monsoon, normally ranges from May to December. Along the course of the Mekong the rise varies. At Luang Prabang, Vientiane, and Savannakhet the rise ranges from about 40 to 50 feet; in the vicinity of the Kemmarat Rapids, where the river is constricted, the rise is as much as 100 feet. This rise in water level is beneficial because it provides sufficient depths for navigation; even in the Kemmarat section vessels with sufficient speed can navigate upstream at the time of high water.

(3) Ferry Sites

(a) General (see Encl (23) Graphic Section)

There are four principal ferry sites crossing the Mekong River between Laos and Thailand. These sites are explained in detail in the following pages, all information available at this time (both past and current) is included. Existing photos and sketches on the sites will be found in the graphic section of this study.

\* \* \*

DOI up to AUG 1959

NAME: MONG KHAU - VIENTIANE Ferry (See Encls (32,33) Graphic Section)

CO-ORDINATES: 17° 52'N, 102° 46'E

ROUTE ON WHICH SITUATED:

NAKHON RATCHASIMA/VIENTIANE

GENERAL:

This ferry is located at the best crossing point over the Mekong River on the stretch between Nakhon Phanom and where the river leaves the border to the west. This is the only ferry site on the Laos/Thailand border that has a POL supply capability. The ferry docks in Thailand are on the south bank of the Mekong River and the ferry docks in Laos are directly across the river on the north bank. Construction is concrete with long sloping ramps to facilitate transfer of cargoes from train to ferry on the Thailand side and from ferry to trucks on the Laos side.

FERRY EQUIPMENT:

Two (2) ferry barges each 20 feet by 79 feet, with a 1.25 meter draft, 100 ton capacity. These barges are towed by 3 tugs, turn about time 1 hour. They have a carrying capability

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

of 1500 tons daily during high water, 600 tons daily during low water. (DOI is 17 August 1959)  
There are 2 mobile 5-ton cranes and 1 fork lift (3 tons) now available on the Nong Khai side.

In 1947, a small boat-building facility was located about 10 km out of Vientiane on the Mekong River.

WATERGAP:

Approximately: low water 2,398 ft.; high water 2,624 ft. This site is considered to be unfordable due to the 6 ft. to over 16 ft. water level with sand bars exposed in places during low water periods.

Note: (1) Newly constructed warehouses for joint useage of Thailand and Laos as stipulated in the Mekong River agreement are located near the site.

(2) Commercial water transportation on Mekong River handled by Societe Transport Fluvial Laotian (STFL).

Equip: Consists of 50 barges of local pontoon design (capacities varying from 50 to 80 tons); in addition - one (1) large flat barge (capacity 150 long tons.) These barges operate between Vientiane and Savannakhet. In addition, USOM controls 2 LCM's capable of trip between Vientiane and Savannakhet.

\* \* \*

DOI up to AUG 1959

NAME: SAVANNAKHET Ferry

CO-ORDINATES: 16° 33'N, 104° 44'E

ROUTE ON WHICH SITUATED:

Savannakhet to Ubon road (via Mukdahan)

GENERAL:

This ferry is located at the best crossing point over the Mekong between Thakhek and Pakse. From Mukdahan, on the west bank of the Mekong, opposite Savannakhet, a road runs southward to Ubon.

The approach road from Savannakhet, on the east side of the river, runs obliquely down the steep bank; on the west bank the road appears to be at right angles to the river. Under operational conditions it is certain that numerous other ferry crossing points would be constructed nearby; these points would be connected to the main road by several feeder roads. The present ferry has a capability of 100 tons daily.

WATERGAP:

About 5,000 ft. in March. (Seasonal variation of water level: 40 ft.)

ESTIMATE OF PORTAGE AVAILABLE IN VICINITY:

Labor is limited; animals are very limited. There is no cargo handling equipment available at this time.

POSSIBLE METHOD OF BY-PASS:

By an improved low-capacity ferry or ferries, making use of existing approach roads, and, possibly, additional feeder roads.

By river craft on the Mekong and Nam Mun rivers to Ubon (suitable only at high-water period Oct.-Nov.).

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

ESTIMATE OF DELAY CAUSED BY DESTRUCTION:

By use of alternate ferry crossings and additional craft, through movement of supplies could possibly be brought up to 50% of normal within a short period (less than 24 hours).

DISTANCE FROM COAST:

120 N.M.

Note: (1) The ferry route is not a direct cross-river run, but detours 4 miles due to sand bars. (DOI July 1959.)

(2) See Nong Khai Ferry Note #2.

\* \* \*

DOI up to AUG 1959

NAME: PAKSE Ferry (See Encl. (34) Graphic Section)

CO-ORDINATES: 15° 06'N, 105° 46'E

ROUTE ON WHICH SITUATED:

PAKSE/UBON road.

GENERAL:

This ferry is located at the best crossing point over the Mekong between Savannakhet and Phnom Penh. All traffic destined for the Ubon area in Thailand reaching Pakse from the East coast would have to cross the river at this point.

It is on the Pakse/Ubon road, where it crosses the Mekong River, at Pakse.

The approach road to the ferry from Pakse is steep and at an acute angle, but on the west bank of the Mekong the approach road is straight.

A powered ferry is in use, but its details and load carrying capacity are not known.

WATERGAP:

About 5,600 ft. in March (Seasonal variation of water level: 40 ft.)

SUITABILITY OF TERRAIN FOR CONSTRUCTION OF DETOUR:

Under operational conditions it is certain that numerous other ferry crossing points would be constructed nearby; these points would be connected to the main road by several feeder roads.

ESTIMATE OF PORTAGE AVAILABLE IN VICINITY:

Labor limited; animals very limited.

POSSIBLE METHOD OF DETOUR:

By an improvised low-capacity ferry or ferries, making use of existing approach roads; also by river craft on the Mekong, Nam Mun and Nam Dom Noi Rivers to Muang Dom on the Pakse/Ubon road.

ESTIMATE OF DELAY CAUSED BY DESTRUCTION:

By use of alternate ferry crossings, through movement of supplies could possibly be brought up to 50% of normal within a short period (less than 24 hours).

DISTANCE FROM COAST:

134 N.M.

L-II-38

SECRET



SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

---

DOI up to AUG 1959

NAME: THAKHEK Ferry

CO-ORDINATES: 17° 24'N, 104° 48'E

ROUTE ON WHICH SITUATED:

Thakhet/Mukdahan/Ubon road

GENERAL:

This ferry is located at the best crossing point over the Mekong River on the stretch between Vientiane and Savannakhet.

The ferry is between Thakhek, on the east bank of the Mekong River, and Nakhon Phanom, on the west bank.

The approach road from Thakhek runs obliquely down the steep bank (30 to 40 feet high), and the western approach appears to be at right angles to the river. No details are known of any ferry equipment in use at present. Under operational conditions it is certain that numerous other ferry crossing points would be constructed nearby; these points would be connected to the main road by several feeder roads.

WATERGAP:

About 3,700 ft. (Seasonal variation of water level: 40 ft.)

ESTIMATE OF PORTAGE AVAILABLE IN VICINITY:

Labor limited; animals very limited.

POSSIBLE METHOD OF BY-PASS:

By an improvised, low-capacity ferry or ferries making use of existing approach roads. By river craft on the Mekong River to Savannakhet or Mukdahan.

ESTIMATE OF DELAY CAUSED BY DESTRUCTION:

By use of alternate ferry crossings and additional craft, through movement of supplies could possibly be brought up to 50% of normal within a short period (less than 24 hours).

DISTANCE FROM COAST:

93 N.M.

---

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

e. TELECOMMUNICATIONS

(1) General

The telecommunications network in Laos is divided into four separate systems; they are controlled by the Army, Air Force, Police, and the Department of Posts, Telephone, and Telegraph (PTT). In considering the communications facilities of Laos it must be remembered that this is a primitive country with a population of about two million. Roads are practically nonexistent and the ordinary citizen has little or no need to communicate over any distance with anyone else. Only the Government and its organs have a need for rapid communications from point to point within the country. Even the communications links as described are not necessarily efficient. For instance, the Army facilities at Muong Sing and Muong Sai in Northern Laos have radio contact with Army Headquarters in the same province only sporadically. Curtailment of the use of the Army radio network is necessary to conserve motor generator fuel since all supplies must be flown in.

The Laotian telecommunications system has been programmed for ICA/USOM aid.

(2) Domestic Facilities

(a) Telephone and Telegraph

The telephone system covers about 395 miles in ten geographic locations, and is of open wire pole line construction. According to the U.S. Army Attache it is delapidated beyond economical rehabilitation. The telephone centrals, with the number of subscribers connected with each central, in 1957, were as follows:

VIENTIANE - 250	LUANG PRABANG - 72	THAKET - 28	KHONG SEDONE - 0
PAKSE - 72	SAVANNAKHET - 65	SARAVANE - 14	PAKONG - 0

In 1951 telephone-telegraph circuits were in operation from Vientiane south to Thakhek, Savannakhet, Kong Sedone, Bassac, and Ban Hat Sai Khoune (near the Laos-Cambodia border). A branch line extended to Tchepone. No information is available on the current status of telegraph lines.

(b) Radio

The Army radio communications system is inadequate and would completely collapse under conditions of serious disorder or enemy aggression. Not only is there a lack of trained operating personnel and technicians, but the equipment itself is in very poor operating condition. Know-how is lacking to perform even first and second echelon maintenance. This situation cannot be improved, nor can the system be maintained even at an acceptable minimum level of readiness and effectiveness, without outside assistance. Such assistance would have to include tactical training, usage supervision in the field, and supplemental training at installations outside the country.

The Air Force network covers the five major airfields at Vientiane, Luang Prabang, Plaine des Jarres (Xieng Khouang), Seno, and Pakse. All of these fields are also used by the Army, French Air Force, and civil air. The installed control tower communications and navigational equipment is 95 percent French manufactured. Should support or assistance be afforded by a U.S. agency, complete replacement of the existing equipment would be required.

Any anticipated progress with respect to improving the dependability of the Army and Air Force telecommunications systems would require replacement of all the dilapidated equipment currently in service. Also required would be the establishment of maintenance shops and signal supply centers in each military region. New equipment and maintenance facilities would be to no avail, however, until personnel were given rudimentary training in the principles of electronics. This, it is estimated, would take a minimum of two years. In many cases individuals would have to be taught how to read and write. At this time, however, the Geneva Agreement precludes affording such necessary technical assistance.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

The National Police radio network parallels the Army and Air Force systems in many locations. Consequently, with experienced operators, the Police network could be of inestimable military value under conditions of serious disorder or enemy aggression. However, despite the fact that this system employs the latest type RCA equipment (ICA sponsored), it operates at a low state of efficiency. Equipment includes both code and radiophone, with provisions for teletypewriter channels, if required. The low state of operating efficiency is due largely to the fact that the system was established on an emergency basis during a period of disorder, and only superficial training was given the radio operators.

On the PTT administrative radio networks, international telegraph code is used exclusively for conveying intelligence between any two geographical points.

(3) International Facilities

There are no international wire facilities in Laos. Radio connections exist with Bangkok, Phnom Penh, Saigon, and Hong Kong.

(4) Appraisal

The official telecommunications systems of Laos are not adequate for the country's needs. The Army and Air Force networks are plagued with a shortage of trained personnel, and their equipment is old, of varied manufacture, and in a state of disrepair. Although the National Police system has modern equipment, its operating efficiency is far below the desired standard because of the lack of trained operators and technicians. The PTT radio circuits need new equipment for the employment of radio-telephones and not just telegraph code. The PTT telephone circuits are antiquated and beyond economic repair. Besides new equipment, trained personnel must be provided before the country will have adequate and efficient communications.

f. Civil Air

(1) Although civil aviation operates on a small scale in Laos, it has become an important supplement to travel via road and waterway. In many cases travel by air is the only means of reaching isolated areas of the country. Government agencies depend almost entirely upon air transportation to maintain required liaison. Civil air carriers have been called upon to aid the small Air Force in providing military airlift, evacuation, and airdrop services.

(2) International service to Laos is provided by Air Laos, Thai Airways, Cathay Pacific, and Air Vietnam.

(a) Air Laos is a French-subsidized company in which several Laotian government officials have large stock holdings. It is the only Laotian company that has scheduled international routes. Although its equipment includes old Boeing Stratoliners, C-47's, Bristol Boxcars, and a Norseman aircraft, the operational capabilities of this civilian airline are adequate to provide a large part of the air support for the Army in an emergency. Current information indicates that Air Laos has daily flights from Vientiane to Saigon, and three flights per week to Bangkok. Flights to Phnom Penh are also scheduled on a weekly basis.

(b) Of the foreign airlines flying into Laos, Thai Airways has three flights per week to Vientiane; Air Vietnam has two flights per week to Savannakhet and two per week to Vientiane; Cathay Pacific flies from Hong Kong once a week to Savannakhet and Vientiane. Civil Air Transport (CAT) is the principal non-scheduled foreign air carrier in Laos. It has a contract with the Laotian Government for special services, such as civilian rice-drop missions.

(3) Scheduled domestic air service is provided by Air Laos and Veho Akat Airline. Air Laos schedules include flights connecting Vientiane, Savannakhet, Pakse, Luang Prabang, Nam Tha, Muong Sing, and other towns.

(a) Veho Akat is a French-Lao civilian corporative venture. Because Air Laos has been granted a monopoly on international flights, Veho Akat has been forced to concentrate on domestic service. The principal towns serviced are Vientiane (where the line's main offices and facilities are located), Xieng Khouang, Luang Prabang, Muong Sai, Nam Tha, Muong Sing, Ban Sayaboury, and Sam Neua.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

(b) In 1956, 56 percent of Veba Aket's flights were for civilian customers, 25 percent for the Laos Armed Forces, ten percent for Laos Government Services, and nine percent for the International Control Commission. At present, the company has four De Havilland Dragons (DH-89), one Noorduyt Norseman (UC-64), and two De Havilland-Canada Beavers (DHC-2). Four new Beavers have been purchased and will be delivered soon. The company's four pilots are French.

g. Logistics

(1) General

(a) There is insufficient information available at present to provide a comprehensive study of the Laotian logistical system. It is known that considerable dependence is placed upon French technicians and advisers, and the French system of subdeposits is no doubt utilized. Until recently all logistic support for the Army was furnished through the French logistical system and was dependent upon it for storage, maintenance and technical knowhow. As a result it lacks an effective logistic base from which to support and maintain its forces. As an evaluation of its effectiveness it can be considered that without substantial French technical assistance in logistic support and service activities, and provision for extensive aerial resupply, the logistical system would probably not be capable of supporting the forces in the field at even minimum combat effectiveness. Even with current French support, supplies are inadequate, particularly in ordnance, munitions, and communications equipment.

(2) Logistical Organization

(a) Service Unit

QUARTERMASTER AERIAL RE-SUPPLY COMPANY (MAP)

1. Location: Vientiane.

2. Mission: Basic mission is reported as Aerial Re-supply of advance units. However, because of the sketchy road net and the limited mileage of navigable waters in Laos, supply of outlying units (not necessarily in advance defense locations) must often be by air drop. Free air drop is utilized where the nature of the supplies so permits.

3. Maximum Capability: Unknown.

4. Present Capability: Specific capability is unknown. The unit is performing its mission in an excellent manner, morale is good and the troops observed presented a soldierly appearance.

(3) POL System-LAOS

(a) Current Capability

1. Supply: Laos depends entirely on imports for her supply of petroleum products. MAP funds finance the military requirements. Present contracts are with Shell, Stan-Vac, and Caltex. Most of the imports are transshipped to the country from the port of Bangkok over the Thai National Railway in Laos-owned cars. If speed is required POL can be flown in as has been done at Luang Prabang. POL generally arrives at the railhead of Nong Khai, Thailand, in tank-cars where it is drummed or transferred; (1) to Shell Oil Co. tank trucks of which there are two (one 2,500 gal., one 1,500 gal. English built) or (2) to military units of which there is one semi-tractor truck with three tank units (one 4,000 gal. and two 2,000 gal. units). Note: only one tractor truck.

2. Drumming Facilities: At Nong Khai these facilities consist of 6 filler units with a capacity of 50 drums per hour.

3. Transport:

a. After either being transferred to tanks or drummed, POL is then moved into trucks and onto a ferry at Nong Khai, across the Mekong River into Laos and on to Vientiane 12 miles away.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

Supply of POL to Savannakhet and then on to Seno Air Facility 20 miles from ferry landing at Savannakhet is done either by barge from the Nong Khai railhead down the Mekong River 278 miles to Savannakhet; (this is considered the better method; info dtd. August 1959); or by rail from Bangkok to Ubon railhead and then transferred to truck and hauled 87 miles over poor road into the Mukdahan/Savannakhet ferry site. Drumming for the railroad route is done either at the port of Bangkok or Ubon. It is reported that there are 90 ton barges available at the Mukdahan/Savannakhet ferry site (Info dtd. August 1959).

b. The limited allocations of rolling stock made available by the Thai railways for movement of POL, both military and civilian, to Laos, threaten to introduce recurring crises into the problems of POL supply. A project is on foot whereby the Thai Railways are to be furnished undercarriages for 40 additional tank cars funded by USOM Laos. However, it must necessarily be many months before this project can bear fruit. In the meantime, both military and civilian POL stocks are likely to suffer recurring and acute shortages. (DOI 6 October 1958.)

(b) Storage

The only reported storage is at Nong Khai ferry site, 4,000 gallon drum inventory maintained (Info dtd. July 1959).

(c) Distribution

Commercial distributors make bulk deliveries to some filling stations in Vientiane. Elsewhere, distribution is effected by drums and tins from depot locations in Vientiane, Savannakhet, Pakse, and Luang Prabang.

(4) Planned Expansion

There are currently no major projects involving POL bulk facilities.

(5) Capability to Support Limited War

Laos, because of its geographic position, is the arch that binds the free nations of Southeast Asia together. Military forces are organized into four regions and are supported by two main depots, Vientiane in the north and Savannakhet in the south. Ground and water transportation capability to logistically support military operations are practically nil.

(a) Installations and Facilities

VIENTIANE QM DEPOT (MAP)

1. Supply: Class I and II and IV.
2. Locations: Vientiane. Sub-depots at Luang Prabang and Plaines des Jarres.
3. Mission and Function: Storage, issuing and maintenance of QM supplies and equipment.
4. Capacity by Class: Unknown.
5. Means of Distribution: By river boat; by road, largely with commercial truckers; by air landing at points that have airfields but no roads; by free air drop; by parachuting supplies.
6. Adequacy: Inadequate.

a. In general, the warehouses are overcrowded and disorganized. In many instances space has been lacking in which to unpack, identify, and store incoming MAP material. Hence, incoming supplies of items have been left for weeks and months in their original boxes with no one knowing their contents.

b. A recent U.S. QM mobile training team (civilians) was helpful in improving actual warehousing. However, top level (ANL-QM) enthusiasm to develop a QM service was lacking. These problems were not unique to the QM service. The PEO is aware of them and means are being considered which should be for the better.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

T-I GENERAL

1. POLITICAL
2. ECONOMIC
3. SOCIOLOGICAL

DOI up to February 1959

except where noted.

T-I

SECRET

THAILAND

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

1. POLITICAL

a. Governmental System

(1) General

On 24 June 1932, a handful of civil and military officials in Bangkok brought an end to one of the world's oldest absolute monarchies and instituted a system of parliamentary government and a limited monarchy.

Prior to the 24 June 1932 changes, Thailand was run by officials appointed by the King. In legal theory all lands and revenues were the property of the King and the government functioned to extract revenue and labor from the population. In addition to his temporal powers, the King was considered to be a reincarnated Brahmanic God, a belief that did much to ensure loyalty and devotion to his person.

The period between 1932 and 1958 was a period of unrest for Thailand, an unrest which is still in evidence today. There have been a number of constitutions promulgated during this period experimenting with the relationship between the King and the government, between different forms of government, and between democracy and military dictatorship.

(2) Domestic Policy

Thai domestic policies are dictated by the need to earn foreign exchange and the need to preserve internal security. Inasmuch as important segments of Thai commerce are controlled by foreign interests, i.e., the Chinese, governmental policy appears to be aimed at replacing the Chinese with Thais. In this connection, a number of occupations have been reserved for the Thais. In regards to improving internal security, the Thai government was considering repatriating some 50,000 Vietnamese refugees in Northeast Thailand to North and South Vietnam. Practical considerations appear to have negated this idea and in its stead a proposal was made to spread the Vietnamese throughout the country in an effort to assimilate them. Inasmuch as many of these Vietnamese are communist sympathizers, it is unlikely that any steps will be taken to broaden their field of operations and subject the country to increased communist propaganda. The status of the refugees will probably remain unchanged for the time being.

Leftist Thai politicians and newspapers have been suppressed and as of the present time the government has given no indication that the suppression will be eased. The other domestic policies of note are standard policies; the perpetuation of Thai cultural traditions, economic development, and social welfare. Promises in these fields are more impressive than are actual performances.

(3) Foreign Policy

The government generally favors and supports US policy but is inclined to be impatient with the slow evolution of Western defense plans for Southeast Asia. The Thai people in general are friendly to the US; however, very few of them are sophisticated or interested enough to have firm views on foreign policy. Close association with the US remains the key-stone of Thai foreign policy. The government pursues this policy both to assure US help in case of Communist invasion and for the substantial material benefits derived from American aid. Thailand shows increasing interests in improving relations with its Asian neighbors--particularly such neutralist countries as India and Burma. The Thai police have been co-operating half-heartedly with their counterparts in Malaya to suppress the Chinese Communist terrorists in the Thai-Malayan border area. Although relations with Cambodia are strained at the present time, the situation appears to be improving mainly due to the efforts of a U.N. mediator in the area. Relations with SEATO countries in Southeast Asia are very good.

(4) Governmental Structure

(a) Executive

Under the terms of the Interim Constitution promulgated 28 January 1959, sovereign power emanates from the people with the King as head of the State and Commander-in-Chief of the Armed Forces.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

(b) Legislative

The new constitution provides for a Constituent Assembly of 240 members appointed by the King, which shall act concurrently as a National Assembly vested with legislative powers. The King appoints the Assembly President. In addition, the King appoints the Prime Minister and an "appropriate" number of ministers who are then excluded from Assembly membership, but retain the right to attend Assembly meetings, make statements, and express opinions.

On paper, the King appears in a very powerful position, but in actuality, the Prime Minister and Army leaders, working together, run the country more or less as a semi-benevolent authoritarian government, using the King as a figurehead. There are several notable departures from the previous Constitution. Assembly members are appointed rather than the previous system of some elected members and some appointed members. This ensures political control of the country. The position of the Revolutionary Group, who effected the bloodless coup of October 1958, is now legalized. It is probable that the Assembly will be dominated by military men.

(c) National Government's Relationship to the Areas

1. Offices and Headquarters

On the provincial (changwat) level each changwat has a Provincial Council, at the head of which is the Resident Commissioner who reports to the Ministry of Interior. This council includes the Assistant Commissioner, the Public Prosecutor, the Chief of Police, and the local representatives of the various Ministries and Departments of the Central Government (Public Health, Education, Military Conscription, Taxation, Public Works, Lands and Mines, etc.).

2. Significance

The provinces remain under the firm control of the central government through the control exercised by the Interior Ministry over provincial finances and official personnel. The provincial councils serve to bring officials together to discuss problems affecting more than one department and the assemblies are empowered, at least in theory, to expose any financial maladministration. Neither of these bodies, however, participates in the actual formulation of governmental policies in the provinces.

3. Local government

a. Nature, organization, and functions

The rural village community is the smallest administrative unit of government. The village headman (pu yai ban), who is chosen by all village residents 20 years of age or older, exercises patriarchal supervision over his people. The district magistrate presides over his election, and the choice of headman must be approved by the provincial governor. His duties include enforcing sanitary and fire prevention measures, dispensing medicines to curb epidemics, assisting with registrations, supplying information reports to the magistrate, transmitting information and regulations from the provincial government, acting as host to visitors, and maintaining peace and order. Village government under a headman has the sanction of tradition and this form of administration is rarely questioned by those under its control.

The next level of administration is the commune, which consists of a group of about ten villages. The administrative officer of the commune is the chief (kannan), who is a village headman chosen as a king or overall chief by the headmen of the other villages in the commune. The election of a commune chief is called and presided over by the district magistrate. The kannan coordinates village problems of mutual concern, such as irrigation, road repair, and marketing. He settles many petty matters involving precedence, property, morals, and manners, thus relieving the district magistrate of much work. His most important duty is to act as a liaison officer between the magistrate and the village headman. He assists the former with tax lists and census records, informs him of local problems and breaches of law, takes care of public property, and helps maintain peace and order.

The average province is divided into about seven districts, the average population being about 35,000. Each district is the responsibility of a magistrate who is appointed by the Ministry of Interior and accountable to the provincial governor. The magistrate



SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

is responsible for public security as well as for the general administration of laws; in consequence, he often earns the reputation of being the hardest-working official in Thailand. To the average farmer the magistrate is the nearest and most effective link with the government, since he not only interprets complex laws and regulations, but also reports the farmer's need to the government. Many magistrates are law graduates, and senior men are well paid. As permanent civil service employees, they have no connection with politics but often reflect the viewpoint of the central government. Above the district is the province which in turn is a part of one of nine regions. The region is directly under the central government.

b. Relationship to the Areas

(1) Significance

Local government has traditionally resided in the popularly elected headman, but the central government has usurped his prerogatives to the point where he has become little more than an underling of the district officer. Reports indicate that the villagers are aware of this and have partly redirected authority toward the Buddhist priesthood, which is the religious arbitrator of village mores and folkways. Power and leadership in civic affairs are no longer the headman's monopoly but now usually are shared among the headman, the older priests, and sometimes the school teachers.

(d) Police

1. National Police

a. Characteristics

The Thai police force has the following functions: (1) to maintain order in conformity with Thai laws; (2) to act as an arm of national defense in times of emergency; and (3) to gather domestic intelligence as a prerequisite for the maintenance of internal security. Under the Ministry of the Interior, the force numbers approximately 43,000, both recruited and conscripted. The Ministry indirectly controls the Volunteer Defense Corps, which in 1955 numbered approximately 18,000 men, and which, in 1957, was said to number more than 120,000. The police, who in some cases are transferred from military duty, usually have had some military experience and are generally of a higher caliber than average army personnel. The police maintain their own paratroops, aircraft, mechanized components, and other units generally associated with a military organization rather than a police force. Military ranks are used throughout.

Enforcement is the task of the provincial police, which are organized by each of the nine administrative regions. Regional police chiefs are responsible to the director general, but changwat (province) police chiefs, as members of the changwat councils, are officially responsible first to the changwat governors. District police chiefs report to the changwat chief. Commune stations usually are assigned to a police sergeant who reports to the district chief. Thus the direct chain of police responsibility is broken only at the changwat level, where the governor interposes himself between the regional and changwat police chiefs.

A close relationship is apparent between the internal political situation and the functions of the various security forces. The police, because of their internal security function, are generally feared and disliked by the populace, who grant a grudging cooperation but only from fear of coercion. In general they are indifferent to the situation except as it directly affects them. Even when it does, they can do little about it. They cooperate as informants, for example, in the hope that by doing so, they will not be bothered further. This attitude helps the intelligence and security forces and the people have shown no ability or real desire to have it otherwise.

b. Local Police

The Thai Police Force embodies in one organization essentially all the functions of the various local, regional, and national police organizations.

(e) Political Parties

1. General

Before 1932 Thailand was both theoretically and in fact an absolute monarchy which governed for the benefit of a small, almost semi-divine elite. In 1932 Thailand ostensibly broke with this past and began a new period of representative constitutional government. It was soon evident, however, that western conceptions of liberal government were neither understood nor particularly important to those outside the national administration. The first government under the new constitution was, although not popularly elected, civilian, but two years later the army displaced its predecessor and since then its pre-eminence has never been seriously threatened except during two years following World War II. Since 1932 Thai political organizations have not evolved to any noticeable degree due to their frequent illegality, uses for personal rather than ideological gain, and dependence on a few wealthy, nationally prominent individuals. The largest political party, before its suspension in October 1958, was controlled by the Army. Direct channels to the national coffers gave this party, the Seri Managkhasila (SMP), the financial resources necessary to extend its organization into the areas outside Bangkok. Consequently it, more than any other, approximated western parties. Twenty two parties, excluding the SMP, existed at the time of national elections in 1957, but only one even faintly vied with the political apparatus of the ruling military clique. The Prachatiwat (Democratic Party) won one third as many seats and became the largest party of opposition. It counted among its supporters many members of the educated middle class and civil service, and generally favored more popular participation in the government and a return to civilian administration. In areas where it was relatively active it polled as many as three fourths of the popular vote. The remaining political groupings, which were political parties in name only, generally were associated with prominent national figures or were groups dedicated to a common cause for personal gain. They did not represent any popular movement, or influence the general tenor of the elections.

The military regime of Marshal Sarit abolished political parties in October 1958, but this should not be construed as changing the dominant pattern of Thai politics. The government remains in the hands of a small military elite. There are signs that, through the spread of education, development of channels of communication, and the increasing role of government in the everyday affairs of the Thai citizen, the present authoritarian system does not satisfy the political requirements of the non-elite, especially the educated middle class. There are still few channels with which to register this discontent, and the result is a widening gap in popular feeling and public policy. While the ruling clique remains solidly entrenched, the rise of more sophisticated political organizations, and ultimately a change in the form of government, is possible.

(f) Public Opinion and Morale

1. Political Attitudes

The salient features of modern political dynamics in Thailand are rule by personality and faction; the coup d'etat as an instrument of change; absence of ideological debate in politics; widespread public apathy toward politics; concentration of political life in the capital city; abuse of office for personal profit; and distortion of western parliamentary and electoral forms. On the other hand these political folkways and morals are changing inexorably. National elections in Thailand usually have been conducted in an atmosphere of mass indifference, with the results well known in advance. It is doubtful whether many voters have any clear concept of the relation of their vote to national policies. Some vote because they feel a personal debt to one of the candidates; others because they have been requested to vote for a certain candidate by their local leaders; and some because their jobs or their status politically requires them to vote. Army commanders have directed their men to vote as a unit.

A feeling that elections are meaningless is widespread. This feeling is found even among the intelligentsia and the civil service. Electoral participation in Bangkok is lower than in many of the rural provinces. Educated Thai feel that they can do little to shape the policies of a government controlled by men whose political power comes, not from fair elections, but from military position.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

## 2. Morale and susceptibility to propaganda

The Thai are well fed and clothed compared to other Asians, and have never been ruled by a colonial power, as have all of their neighbors. Their morale is considered good and their susceptibility to Communist propaganda is considerably less than that of their neighbors.

Prior to the end of World War II, newspapers and radios were luxuries available primarily to the middle and upper classes of Bangkok and a few of the larger towns. However, the limited effectiveness of the press and radio is not solely a matter of cost, although the price of newspapers and the expense of purchase and upkeep of radio sets still keep these media in the luxury class. A more fundamental limitation to the appeal of mass communications media is the attitude of the potential reading and listening audience. Except for those living near Bangkok, Thai peasants, by and large, are not interested in events beyond the village horizon. Interest in foreign movies is largely a matter of entertainment. The peasant is accustomed to being told what he must know about secular affairs by his headman and the local teacher, and about spiritual matters by the monks. He has not been conditioned to seek beyond them, and he tends not to question matters which he has neither the desire nor the ability to influence or control.

## 3. Propaganda media

All the mass communications media to be found in western countries exist in Thailand, though the extent and effectiveness of their use are limited by local conditions. Much of the technical equipment and managerial talent serving these channels of public information does not meet western standards. But the role of mass communications media in Thailand is determined, not by methods and techniques of operation, but by a tradition of autocratic government which has been carried over from the absolute monarchy to the present nominal democracy. News media are used to direct ideas along desired paths rather than to inform impartially or to stimulate independent thought. All radio stations are owned and operated by government departments. A large number of newspapers are owned outright or strongly dominated by government leaders. Independent journals are kept in line either by formal censorship or by informal pressure, which on occasion has included serious and unexplained "accidents" to editors unwilling to conform.

The spreading of news is a question of interest. In the vast majority of cases, the newspapers are not the first to bring news into remote areas. Rumor reaches the most remote areas within a few weeks of an event; if the people are concerned, they can acquire the newspapers or periodicals for more information. There are some indications that a growing interest in affairs outside the village is beginning to be reflected in the greater influence and importance of formal news media, both press and radio, as sources of information throughout rural Thailand.

## 4. Subversive movements

Communism in Thailand is weak in influence as well as in numbers. The Thai Communist Party was founded in Bangkok around 1923, but did little during most of the 1920's and 1930's beyond circulating a few pamphlets and organizing a few rice mill workers. During the period just before World War II, it had some success in organizing an anti-Japanese front among the Chinese in Thailand, but did not participate in the Thai underground movement during the war. After the war it continued to work mainly through front groups among students and workers. It has attempted, with no detectable success, to influence the curricula in the Chinese schools. It had very substantial influence in the now defunct Central Labor Union and in the Swatow Association, one of the largest Chinese regional associations.

Communism is weak because Thailand has neither a critical problem of rural poverty and landlessness nor a large urban proletariat. In addition, practically every Thai has a profound attachment to Buddhism and to the King. Thailand also has no tradition of colonial rule, and therefore no history of violent nationalist opposition to the states and ideas of the west. Communism has been illegal in Thailand except between 1948 and 1952 and every government since 1932 has been aggressively anti-Communist.

What little success Communism has experienced in this country has been with the Vietnamese refugees of the Indo-Chinese war and with the overseas Chinese. Malayan Communists continue to cross into Southern Thailand and maintain hideouts in the border area.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

(g) Future Developments

The Constituent Assembly has been given the task of drafting a permanent constitution. When a draft is finished, the Constituent Assembly will sit as a National Assembly and resolve whether or not to present the Constitution to the King. It will probably be several years before this happens.

(h) Political Personalities

1. US Representatives in Thailand

a. State Department

Ambassador  
Consul

U. Alexis Johnson  
Leonard Unger

b. US Service Attaches

Army Attache  
Naval Attache  
Air Attache

Col A. M. Hoffman  
CDR John F. Jansen  
Col P. A. Pettigrew

c. MAAG

Chief, JUSMAG  
Deputy Chief, JUSMAG  
Chief, Army Section  
Chief, Navy Section  
Chief, Air Force Section

Maj Gen Briard P. Johnson  
Col David B. Routh  
Col Roy E. Doran  
CAPT R. H. Close  
Col W. H. Hanson

d. USIA

Counselor (Public Affairs)

J. H. Garnish

e. International Cooperation Administration (ICA)

Director

Thomas E. Naughten

2. Officials of the Government of Thailand:

a. King

Phumiphon Adundet

(Thanom Government resigned 20 October. New Government not yet formed. Senior military officers organized by Marshal Sarit into a Revolutionary Council, temporarily governing nation.

3. Military Officials:

a. Supreme Commander, Thai Armed Forces

Field Marshal Sarit Thanarat

b. Commander in Chief Royal Thai Army

Field Marshal Sarit Thanarat

c. Commander in Chief Royal Thai Navy

Flt Admiral Chammarn Atthayut

d. Commander in Chief Royal Thai Air Force

Air Marshal Chalermkiat Vatanagkura

e. Commander of the Royal Thai Marine Corps

Commodore Prasong Phibunsonggram

f. Director, Army Intelligence Department

Maj Gen Amnuay Chya-Rencha

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

- g. Chief of Defense General Staff  
(No US equivalent) Lt Gen Jira Vichisonggram
- h. Chief of Joint Intelligence  
Division Maj Gen Wek Chiewvej

4. Biographic Sketches:

- a. NAME: PHUMIPHON Adunadej

PRESENT POSITION: King of Thailand

LANGUAGES: Thai and English

DATE AND PLACE OF BIRTH: 5 Dec 1927. Boston, Massachusetts, USA

FAMILY: Wife - Queen Sirikit  
Children - 3 (two daughters and a son)

EDUCATION: European-educated

POLITICS: As a constitutional monarch, the King is prohibited from direct participation in politics.

PAST CAREER: 1946 Ascended the throne. (Studying in Switzerland at the time.)  
1946-1950 Remained abroad to complete his studies.  
(Except for a few visits, the King spent practically all of his first 24-years outside Thailand, for the most part, in Switzerland.)

RELIGION: Buddhist

\* \* \* \*

- b. NAME: SARIT Thanarat (Field Marshal)

PRESENT LOCATION: Supreme Commander, Thai Armed Forces

LANGUAGES: Thai and some English

DATE AND PLACE OF BIRTH: 1908, Bangkok

FAMILY: Married, one son

EDUCATION: Graduated from the Royal Thai Military Academy, 1929.

POLITICS: Marshal Sarit, as leader of the ruling military group is the dominant political force in Thailand and all major policy decisions must have his approval. He plays a significant role in welding together the various factions within the ruling group.

PAST CAREER: 1946 Commanding Officer, 1st Inf Regt  
1948 Commander of the 1st Army  
1952 Deputy Commander of the Army  
1954 Commander of the Army  
21 Sep 1954 Deputy Minister of Defense  
1957 Supreme Commander, Armed Forces

RELIGION: Buddhist

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

NAME: THANOM Kittikhachorn (Gen)  
PRESENT POSITION: ex-Prime Minister and Minister of Defense  
LANGUAGES: Thai and English  
DATE AND PLACE OF BIRTH: 11 AUG 1911. Tak Province  
FAMILY: Wife - Chongkol  
Children - 6, Mrs. Nongnart Phanjati, 26 (f);  
Lt Narong, 25 (m); Mrs. Nongnoot Chiraphong, 21 (f);  
Cadet Yuthaphong, 18 (m); Songsuda, 14 (f);  
Songsamorn, 12 (f)  
EDUCATION: Preparatory, Standard, Pre-University, all in  
Army Academy. Army Academy 25 MAR 1929  
PAST CAREER: Mar 1929 Platoon Leader 3rd Bn, 8th Inf  
Dec 1932 Promoted 2d Lt  
Sep 1934 Section I Survey Department  
Sep 1934 Army Survey School  
Apr 1935 Promoted 1st Lt  
Oct 1935 Education Section, Hqs, Army Academy  
May 1936 Instructor, Military Subject in Army  
Academy  
Apr 1938 Promoted Capt  
Apr 1939 Instructor, Military Subject in Army  
Academy  
Apr 1939 Infantry School  
Sep 1943 Promoted to Maj  
Jul 1944 Promoted to Lt Col  
Jan 1947 CO, 4th Co Army Academy and Instructor  
Jul 1948 Promoted to Col  
Oct 1948 CO, 11th Inf Regt; Promoted to Brig Gen  
Aug 1949 Deputy CG, 1st Inf Div  
Aug 1950 CG, 1st Inf Div  
Jan 1951 Promoted to Maj Gen  
Dec 1951 Deputy CO, 1st Army  
Jul 1953 Thai delegate to UN Command Military  
Armistice Commission in Korea  
Sep 1954 Thai delegate to SEATO  
Sep 1954 CG, 1st Army  
Jan 1955 Promoted to Lt Gen  
Jul 1956 National Defense College  
Apr 1957 Minister of Cooperation, and Deputy  
Minister of Defense  
Aug 1957 Asst Commander in Chief of the Army  
Sep 1957 Minister of Defense  
Jan 1958 Prime Minister, concurrently Minister  
of Defense

RELIGION: Buddhist

\* \* \*

d. NAME: PRAPHAT Charusathien (Lt Gen)  
PRESENT POSITION: ex-Minister of Interior; CG, 1st Army Area  
LANGUAGES: Thai and limited English  
DATE AND PLACE OF BIRTH: Late 1912, Thailand  
FAMILY: Wife - Unknown  
Children - Unknown

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

EDUCATION: Graduate, Royal Military Academy

PAST CAREER: 1929 Cadet, Royal Military Academy  
1933 Appointed 2d Lt  
1936 Section in Police Department  
1942-1952 Held Regimental Commands  
1951-1957 Been an appointed member of the National Assembly  
1952 CG, 1st Div and First Army  
1956 Appointed to committee investigating illegal  
traffic in opium  
1957 Deputy Minister of Interior  
1957 Promoted to Lt Gen  
1957 Minister of Interior, CG, 1st Army Area

RELIGION: Buddhist

\* \* \*

e. NAME: CHALERMKIAT Vatanagkura (Air Chief Marshal)

PRESENT POSITION: Commander in Chief, Royal Thai Air Force

LANGUAGES: Thai and fair English

DATE AND PLACE OF BIRTH: 15 August 1914, in Thailand

Family: No information available

EDUCATION: Graduated Royal Thai Military Academy in 1934; attended  
Command and Staff College in England in 1951-52

PAST CAREER: 1936-48 Commander of various air wings  
1950-52 Several staff assignments at Hq. Thai Air  
Force  
1952-54 Vice Chief of Staff, Tactical Air Command  
1954-55 Chief of Staff, Tactical Air Command  
1955-57 Commander, Tactical Air Command  
1957- Commander in Chief, Royal Thai Air Force

RELIGION: Buddhist

\* \* \*

f. NAME: KHUANG Aphaiwong

PRESENT POSITION: Not in government

DATE AND PLACE OF BIRTH: May 1902. Battambang Province, Cambodia

EDUCATION: Educated in France as an engineer

POLITICS: Leader of the Democratic Party

PAST CAREER: 1932 Director of the Department of Posts,  
Telephones and Telegraph  
1935 Member of the Cabinet  
1938-1944 Deputy Minister of Communications  
1944-1945 Prime Minister  
1946 Prime Minister for two months  
1946 Assumed leadership of the newly formed  
Democratic Party and became opposition leader  
1947-1948 Prime Minister  
Jan 1948 Chairman of the Prachatiapat Party  
Jan-Feb 1948 Prime Minister  
1955 Chairman of Prachatiapat Party

RELIGION: Buddhist

T-1-9

SECRET

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

2. ECONOMIC

a. Economic Factors

(1) General

The economy of Thailand is predominantly agricultural. Economic stability is almost entirely dependent on world market prices for rice, rubber, tin, and teak. Thailand enjoyed an unprecedented postwar prosperity which reached its zenith during the Korean War. Declining prices for its export commodities in the past few years have placed a strain on the balance of payments. However, with somewhat more careful management, Thailand should remain relatively prosperous.

Thai fiscal policy is conservative. The legal reserve requirement is 60 percent in foreign exchange, gold, and foreign securities. Actual currency backing is considerably higher.

(2) Banking System

A central bank, the Bank of Thailand, was established in 1942. It is the sole bank of issue, operates the foreign-exchange system, manages the public debt, and is banker and fiscal agent to the government and other banks. General supervision of the bank is vested in the Ministry of Finance. The Bank of Thailand has comparatively limited relations with, or control over, commercial banks in the country. It has no powers of direct action for general or selective credit control, nor can it make loans directly to the public. Its powers of supervision and inspection are extremely limited, and it has thus far played a minor role in supplying or controlling local credit needs. There are 26 commercial banks, of which 11 are foreign owned. The foreign-owned banks finance mainly foreign trade, while the domestic banks--most of which are controlled by members of the ruling clique--handle the bulk of bank deposits.

(3) Government Controls

As the leading domestic investor in the economy, the government necessarily exercises profound influence on the economy. It controls foreign trade through a complex system of exchange differentials, quotas, tariffs, etc. The government owns and operates plants in 13 of 20 leading industry groups. Members of the ruling clique, through a complex system of interlocking directorates, are gradually gaining monopoly over most facets of domestic trade, although the Chinese are still probably the most powerful economic group in Thailand.

b. Natural Resources

There is plenty of land in Thailand. Rice production, the key to national prosperity, could be expanded considerably. Acreage yields are quite low, both because of antiquated farming methods and soil infertility. Other crops include tobacco, corn, sugar, peas, beans, coconuts, and peanuts. Rubber is the second most important agricultural commodity, although Thailand produces only five to six percent of world production. Agriculture, forestry and fisheries combined, constitute over 50 percent of the gross national product.

By world standards, Thailand is a small producer of minerals and is poor in the basic minerals needed for industrialization. Mineral production in 1952 contributed 1.6 percent to the GNP. Tin production, about six percent of world total, was 13,154 long tons in 1952. Other minerals include wolfram, precious stones, and lead-zinc concentrates. There are limited and widely scattered iron ore deposits, only one of which has yet been exploited. Almost all mineral production is exported.

The energy potential (fuel) is small. Rice husks and wood are the only presently utilized domestic fuels. Small deposits of shale, petroleum, and lignite exist but are not produced commercially. The government, in conjunction with International Co-operation Administration (ICA), is attempting to develop lignite mining. There is a small but important hydroelectric potential which the government hopes to develop in the next few years.

c. Industry

Industrial production is not important, contributing only about 14.7 percent to the GNP in 1952. Thailand is totally dependent on imported machine tools and lacks repair facilities for heavy equipment. Industry is concentrated around Bangkok and is therefore highly vulnerable to air attack. The country is technologically backward. Rice milling is by far the



SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

most important industry.

No important facilities for the manufacture of capital goods exist. There is one small iron and steel plant which contributes some of the simpler materials needed for construction.

Thailand is dependent largely on imported consumer goods. Principal industries in Thailand are cotton textiles, food canning, alcohol distilling, tobacco processing, and sugar milling.

There is one powder plant 50 miles north of Bangkok. It, together with two arsenals, gives Thailand a potential capability to produce small arms and ammunition required by its armed forces.

d. Foreign Trade

Principal exports items have always been rice, tin, and teak. Rubber has replaced teak and tin in importance since World War II. In 1956, approximately 90 percent of the rice export went to the Far East countries, mainly Japan and the British Dependencies in the Far East. In 1956, the United States took 93 percent of Thai rubber products. In 1957, Thailand sold most of its tin-ore production to Malaya for smelting and re-export.

Principal imports, in order of importance, are: textiles, metals and manufactures, vehicles and parts, machinery and parts, and foodstuffs. Principal sources are Japan (21 percent of total imports in 1956); U.S. (19 percent); U.K. (11 percent); and Malaya and Singapore (10 percent).

Little is exported directly to the Sino-Soviet Bloc. Thailand still adheres to the UN embargo and other sanctions; however, public pressure is mounting for the relaxation of trade restrictions, particularly regarding rice. Thai imports from the bloc have been small, although indirect imports of cheap flashlights, bicycles, etc., from Communist China have increased.

e. Summary

In summary, Thailand's economic position is basically sound, with a favorable international payments position in the last three years. Foreign exchange reserves are substantial relative to import requirements. The national debt, although increasing, is still relatively low. Thailand's heavy dependence upon exports of rice, tin, rubber, and teak make the country vulnerable to weather conditions and conditions in export markets. Export and import taxes bring in more than 50 percent of total government revenue. In 1958 the military establishment was allotted 20 percent of the national budget, a three percent reduction from the amount allotted in 1957. There is increasing pressure to allot a greater percentage of the budget to economic development with a corresponding reduction in military budget.

3. SOCIOLOGICAL

a. General Character of Thai Society

Thai Society is predominantly rural, with almost 90 percent of the people living in villages and supporting themselves by farming, fishing, rubber tapping, and lumbering. Thai economy is based chiefly on the production of rice for local consumption and for export. Rice farming by intensive methods, involving small plots of land, irrigation, and hand planting and harvesting, is the chief occupation of rural families, nine tenths of whom cultivate their own land. Some arable land still remains unoccupied, and more land will be available when irrigation dams under construction are completed. Agrarian movements arising from widespread economic distress are unknown. While the tempo of life in rural Thailand has as yet been little affected by population pressure, it has been quickened somewhat in recent years by improved communications, the introduction of crops other than rice, and by a change from a subsistence to a money economy.

The predominantly rural population of Thailand looks to Bangkok (Krung Thep) for the highest expressions of Thai culture and for social, economic, and political leadership. Bangkok, the only large city in the kingdom, is the center of learning, commerce, and communications, as well as of government. Its prestige is enhanced by the presence of the royal court with its cultural traditions derived from centuries of national independence.

SECRET  
 SPECIAL HANDLING REQUIRED  
 NOT RELEASABLE TO FOREIGN NATIONALS

b. Population

(1) Rural

Excluding the seven provinces which encompass the major part of the lower central plain and two provinces to the north in the Chiengmai area, rural Thailand is underpopulated with an average population of about 144 people per square mile. Today more than 40 percent of the people live on the lower, heavily silted central plain, in a space smaller than 25 percent of the country's total area. The annual increase in population is two to three percent, with the ratio of births to deaths approaching two to one. The rural areas of Thailand include more than 90 percent of the total population of the country.

(2) Urban

Bangkok, the capital, is the largest Thai city and has a population of 1,770,000. The next largest city is Chiengmai, with a population of about 80,000. Bangkok is the only true urban area. In 1947, there were only 33 Thai communities with a population of more than 10,000, only two of which exceeded 25,000. The population density of Bangkok is approximately 3,700 per square mile.

Thailand is a country of villages. Less than 10 percent of the people live in communities of more than 5,000 population. The villages, moreover, are small, averaging 100 to 150 households, or 500 to 750 persons. Usually the villages string out along a canal or road. In the mountain country they nestle in the valleys. In the lower central plain the villages crowd upon one another so closely that often only administrative lines distinguish them. Elsewhere they are distinct entities, often with little communication.

(3) Ethnic groups

The peoples of Thailand represent many ethnic, racial, and linguistic divisions. Racial differences have little importance, because the Thai do not count race among the determinants of behavior or consider particular physical traits as marks of superiority or inferiority. On the other hand, the Thai traditionally distinguish groups on ethnic grounds, and some ethnic groups hold special position in the national life.

The Thai are the dominant ethnic group, accounting for perhaps 18,585,000 members of the total 1957 population of around 22,800,000. These people show general Indonesian-South Chinese physical features and speak the Thai language, which is distantly related to Chinese. Their religion is Theravada Buddhism which they received centuries ago from India and Ceylon, with strong traces of Brahmanism and ancient superstitions. Their predominant way of life is that of the small agriculturist; some are government employees; a very few are merchants and traders.

Within the broad category "Thai", there are a number of regional subgroups. The differences among the Thai, however, are far outweighed by similarities. The Thai, compose a homogeneous spiritual community, sharing the same language (in spite of dialect differences) and religion, agreeing upon the fundamental questions of morality, moving toward the same destiny, and torn by no internal debates on what it means to be a Thai. The country is dominated and unified ethnically and spiritually by the Thai.

The Chinese, numbering perhaps 3 million, form the largest and most important ethnic minority. More than 50 percent of them live in the southern central plain. Half of Bangkok's population is Chinese. Another major Chinese concentration is in the Kra Isthmus region, where they labor in the tin mines and on the rubber plantations. The rest are scattered throughout the small villages of the countryside. In general, most Thai are farmers and most Chinese are traders, industrialists, bankers, and laborers. The Chinese have thus stepped into the gap created by the Thai's aversion to non-agricultural occupations. The Chinese form an unassimilated element in the social body. They follow their own ways of morality and religion, speak their own language, join their own private social organizations, and marry mainly within their own group. Throughout rural Thailand there is very little feeling against the Chinese; indeed, the Chinese shopkeeper or rice miller is regarded as a valuable member of the community, performing essential services at reasonable cost. Only in the very largest towns, and especially in Bangkok, has articulate anti-Chinese sentiment begun to appear. In spite of their leading commercial role, the Chinese do not play an important part in politics.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

The Malays--about 670,000 of them--form another important ethnic minority. Seven eighths of them live in the four southernmost provinces, where they comprise 80 percent of the population. Their language is Malay, their religion Islam. They follow their own leaders in political affairs and resist all official efforts toward assimilation. They have achieved special representation in Bangkok and in numerous provinces, and have persuaded the government to permit the teaching of the Malay language and the Islamic religion in public schools throughout the southern provinces. Malay leaders recently have raised the issue of union with the Federation of Malaya.

After the Chinese and Malays come a variety of other ethnic minorities, none of which has much importance. In the northern corner of the northeast are sizeable pockets of Vietnamese, recent refugees from the fighting in their own lands. The government regards these people as of dubious loyalty--most of them favor the Viet Minh regime--and this regime is currently trying to move them back to their homeland.

c. Language

<u>LANGUAGE FAMILY</u>	<u>LANGUAGES</u>	<u>DIALECTS</u>
Sino-Tibetan	Thai*	Thai or Siamese Thai Khorat Northern Thai or Thai Yuan
	Lao or Thai of the NE*	Kao Wieng Phuan Phuthai Yo Yuai
	Lu Shan or Ngio Yao	
	Chinese	Hakka Cantonese Teochinu Hokkien Hainanese Mandarin
Malayo-Polynesian	Musso or Lahu Ko or Akha Lissu Karen Miao	
	Malay* Chaonam, or Moken	
Indo-European	English* Pali (religious language) Other Indic languages	
Mon-Khmer	Chong or Samrae So Saek Soai or Kui Kalong Kha Brao Khmer Mon Kha Tin	

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

<u>LANGUAGE FAMILY</u>	<u>LANGUAGES</u>	<u>DIALECTS</u>
Annam-Muong	Vietnamese	
Dravidian	Telegu Tamil	
Negrito	Semang or Gongas	
Pho Tong Luang or Yumbri		

\* Languages of greatest importance

English is the only European language widely known in Thailand. In many private schools it is taught from the elementary grades on; in public secondary schools it is usually chosen to fulfill the compulsory foreign language requirement. Thus, almost all high school graduates in Thailand have had at least six years of English training.

English is used particularly in Thai elite circles. It is the language of cosmopolitan Bangkok society and of Thai international trade. Members of the Thai middle class--government officials and clerical workers--both in Bangkok and the provinces know English and use it with foreigners. In the provinces even people without a secondary school education may know a few words of English--acquired from films and advertisements of American and British products. The lack of modern technical terminology in the Thai language and the limited number of textbooks in Thai have made the use of English almost unavoidable in the universities, especially for higher technical education. The opportunities for Thai students to receive part of their education abroad in the United States or Britain has brought about an increasing awareness among students of the desirability of fluency in English.

d. Local Customs and Traditions

Compared with that of most Asian countries, Thailand's population is remarkably homogeneous. Even westernization has not yet seriously affected the basic orientations of the culture toward social interests, goals, attitudes, and values. To the vast majority of the Thai the most important social value is what might be termed "religious morality" or devotion. Among the rural male population, service in a monastery is the primary path to esteem and prestige. Theravada Buddhism provides rules and values covering every conceivable ethical situation in which a human being might find himself, but it also allows individual interpretation of these rules, and any lay person may select as many or as few as he wishes to use to guide his life. Thai ethics are not absolute--no one is expected to follow all of the rules; however, the more rules a man conforms to, the more moral and excellent his life is considered. In general the Thai people are not amenable to sustained regimentation. They do not make very good soldiers, for it is hard for them to adapt to the regimentation and routine of military life; neither do they have the sense of administrative regularity that attaches a person to a business schedule or a time clock. The vast majority are independent, self-employed rice farmers responsible to no one but themselves, their only schedule the necessities of assuring the season's rice crop. Self-reliance combined with peacefulness, quietude, and nonaggression are perhaps most frequently named by Thai as the most important of all personal traits.

Most Thai consider authority and hierarchy natural to the human situation and not in contradiction to their belief in individualism. It is doubtful whether they could conceive of a social situation without distinction between superior and inferior positions. Peasants and others of low social status have never viewed such a social system as particularly unreasonable or severe, and Thailand has had no history of general social oppression. Most people seem to feel that those who have status and authority derive them to a certain extent from their moral and ethical excellence; there is a strong Buddhist element in the belief that social position is a function of one's accumulation of merit and demerit.

Among the urban elite great emphasis is placed on political power, social connections, economic standing, education, and family background. Bangkok has a developed class structure, a value system usually associated with class differentiation, and a variety of class consciousness notably absent in rural Thailand. The people of the rural areas consider that residents of Bangkok have great prestige, but this is based largely on respect for the city itself as the

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

residence of the king, the center of the religious and secular authority, and, in recent times, the center of the westernizing influence. Most Bangkok Thai believe that the more westernized they become, the higher status they are likely to have, at times the desire for things western taking the proportions of a mania.

e. Characteristics of the People

About 77 percent of the population of Thailand is of Thai stock which migrated southward from China chiefly in the twelfth and thirteenth centuries. Related Thai groups exist today in Southern Yunnan, Northern Burma, and Northern Indochina, but political and linguistic as well as geographical differences impose barriers between them. Most Thai have some admixture of Mon, Khmer, Chinese, or other blood, frequently resemble members of these minority groups, and often intermarry with them.

The people of Thailand with few exceptions understand the Thai language, which is used throughout the country in government administration, in schools, in radio broadcasts, and in most publications. The alphabet resembles Cambodian script and originated from an Indian prototype. At present the Thai vocabulary is expanding rapidly through the adoption of new technical terms coined from Pali and Sanskrit roots. The Thai derived most of their classical literature as well as their art from India, despite their greater proximity to China and their greater physical resemblance to the Chinese.

Hinayana Buddhism has had a marked influence on Thai values and attitudes. Its ethics made for tolerance and an orderly society, but its philosophy failed to give creative minds an incentive for improving social and material conditions. Modern production methods are importations from the West. The Thai have a veneer of modernization beneath which remains a fatalism, a passivity, and a readiness to accept defeat that are derived from Buddhism. Being Buddhists they feel a spiritual kinship with other orientals of like faith, but this is not an important factor in international relationships. Thai leaders are chiefly concerned with national security and economic development and to obtain these they rely on the United Nations and the West to furnish the necessary technology, funds, and military aid. At the same time, government leaders fear that the readiness with which their countrymen adopt Western culture may be a weakness in terms of national solidarity.

f. Religion, Education, and Public Information

(1) Religion

Buddhism of the Southern or Hinayana type, in contrast to the Northern or Mahayana type found in China and Japan, is the state religion of Thailand. About 85 percent of the people, including nearly all who are of Thai blood, are Hinayana Buddhists.

The Monastic Order is the sole important institutional manifestation of Thai Buddhism. Consisting of over 200,000 monks and novices, the Order is the largest nongovernmental organization in the country and is larger numerically than the armed forces and the police combined. The Order is mystic and nonpolitical in its intent and program, but to some extent is an agency of the government. National leaders call upon the Order to participate in state ceremonies, to direct the ethical instruction of students, to urge improvement in public morals, and to help preserve national unity.

The great majority of the Muslims in Thailand live in the southern provinces. Most of them speak the Malay tongue, show little interest in a Thai education, and follow a diluted form of Islam. Since these Muslims live near the border not far from the area in which communist guerrillas have been harassing Federation of Malaya authorities, the Thai Government has felt compelled to give them special consideration and to grant numerous concessions with respect to Muslim observances and law. The rank and file of the Muslim population of Thailand may become increasingly group-conscious as they become better educated and more aware of Muslim opinion and leadership in other lands.

Because of educational and medical work conducted by missionary societies, Christianity plays a more important role in Thailand than the small number of its adherents would suggest. Three factors have contributed to the tolerant attitude of the Thai Government toward the small Christian minority: (1) experience with a firm Muslim minority; (2) the paucity of Christian converts; and (3) the connections of Christian missionaries with Western nations.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

## (2) Education

Thailand's leaders have actively promoted general education not only in order to increase the literacy rate, now estimated at approximately 50 percent, but also to stress vocational training for future farmers and industrial workers, and to assimilate racial minorities as far as possible through Thai schools. The Compulsory Education Act of 1921 has been so successfully enforced that about 95 percent of all children in Thailand between the ages of eight and fifteen are attending school. The requirement for compulsory attendance is being raised from four years to seven years.

The government contributes relatively little financial support to education in Thailand; since 1937, only about 13 percent or 14 percent of the national budget has been allocated to education. Government expenditures for the operation of primary schools in Thailand are lower, partly because the establishment of schools in temple buildings has eliminated the need for expensive school construction and partly because teachers' salaries have, until recently, been extremely low. The quality of teaching in these schools has obviously suffered under these conditions.

All universities are controlled and operated by the government. Since 1945 they have had to operate on inadequate budgets and submit to political interference. During the same period, however, an increasing number of Thai students have gone abroad for further training.

The Ministry of Education has requested and received considerable aid from UNESCO and from the U.S. Government since 1949. Much of this assistance has been in the form of surveys, plans, recommendations, and demonstration teaching, and it therefore seems likely that, with the aid of international agencies, Thailand's educational system will be using modernized methods, curricula, and textbooks within the next few years.

## (3) Public Information

Bangkok is the news and information center of Thailand. The nation's radio broadcasting stations, all of them government-controlled, are located in the capital city, which is also the base of operations for Thai motion-picture producers and international news and film distributing agencies, as well as the publishing center for Thailand's newspapers and periodicals.

Newspapers and periodicals are effective not only because Thailand's literacy rate is high for Asia, but because Thai publications are in plentiful supply, have attractive formats, and are fairly well distributed. They appear in three languages, Thai, Chinese, and English, and publications in all three languages reprint much of the material distributed by the Thai government.

Since 1945, there has been a marked increase in the use of educational films by schools, by government organizations, and at popular gatherings, such as temple fairs and public banquets. The United States supplies most of these films, many with sound tracks for subtitles in either Thai or Chinese. Films, like the radio, have a larger audience than newspapers because of the high percentage of persons who cannot read.

## (4) Manpower

Thailand does not have a large industrial or factory labor force. Only 20 percent of the total labor force is engaged in non-agricultural pursuits, most of them in trade or finance.

In general, custom and competition determine the manner in which Thailand utilizes its manpower to exploit the country's resources. The government has placed few restrictions on the employment of labor, and the few existing protective labor statutes are not rigidly enforced.

The labor union movement is considerably encouraged by the presence of Chinese in the labor force, yet the government's attitude tends to restrict Chinese labor activities. Chinese workers are inclined to organize and are generally employed in occupations which favor the formation of labor unions. To counteract Chinese influence in the field of labor organization, the Thai government has sponsored an exclusively Thai labor union, at the same time imposing various controls on the union activities of the Chinese.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

9. Health and Sanitation

(1) Health

For an underdeveloped tropical nation Thailand has excellent health conditions. The various medical organizations working in the nation, both Thai and international, have found their efforts rewarded. Malaria, the most serious killer before 1950, has been drastically curtailed, and there is progress in controlling other diseases. The Thai still adhere to longheld folk beliefs, but when properly dealt with, they have not blocked medical progress. Despite ingrained beliefs concerning diet, the Thai attitude does not hinder medical and sanitary measures.

Although each of the provincial capitals has at least one hospital or health center, public health services in rural areas commonly are inadequate and unsatisfactory. Consequently, many Thai peasants have little contact with modern doctors and in most cases of illness rely on their own traditional remedies and on local practitioners. Thai medical belief and practices are a mixture of Chinese and Indian theories, Buddhist and traditional empirical techniques that have been largely developed through trial and error.

The most important diseases in Thailand may be classified into two groups: those which are major causes of death, and those which are primarily debilitating in their effects. The major causes of death in descending order are malaria, diseases of infancy, intestinal diseases, pneumonia, tuberculosis, and diseases of pregnancy and childbirth. Important debilitating diseases are yaws, leprosy, and in certain areas, filariasis and venereal disease. Malaria, dysentery, diarrhea, and enteritis are both killers and debilitators.

The climate of Thailand is one of extreme regularity and on the whole may be termed comparatively healthful. However, heavy rainfall and high temperature and humidity, together with dense tropical vegetation provide favorable conditions for the breeding of mosquitoes. Malaria is everpresent and filariasis is also endemic. The hot, moist climate often has an enervating effect on persons newly arrived in the Area.

(2) Physical and Psychological Characteristics of the Native Population

The Thai, like the Chinese, are racially mongoloid but form a distinct group of their own. They are not of unmixed Thai stock so that the broad category of "Thai" includes a number of regional subgroups. The Thai have intermingled with Chinese and Burmese in the North and with Mons and Khmers in the South and East.

The Thai are proud of their ancestry and are not by temperament bellicose; they are not physical cowards but are very patriotic. They are good-natured folk, courteous to one another and to strangers, manners are an inherent part of their character, inculcated from the earliest years by habits of respect for parents, elders, priests, and teachers. Observers count humor among the Thai's most notable traits; wit is much prized. Thai humor is sharp, deflating, and critical. They have little sympathy for the dupe, feeling that each man must guard himself.

The family in Thailand usually consists of five or six members. Within a single village many people are related by blood or marriage. Each married pair normally establishes its own residence, owns its own land, and earns its own living. Family government is not harsh, children are treated permissively and are instructed by repeated example rather than by enforced decree.

Thailand is a country of villages (less than 10 percent of the people live in communities of more than 5,000) which are usually small averaging from 100 to 150 households or from 500 to 750 persons.

From a medical standpoint, the Thai do not seem to have a single consistent theory about the cause of disease in general; the people do not fully understand or appreciate the need for personal hygiene, for safe-guarding food and drink, and protecting themselves from insects and rodent carriers of disease. While many common afflictions are recognized and easily diagnosed as of physical origin, others are believed to be the work of evil spirits which, from whim or malice, enter the body, cause a disturbance, or begin to devour the victim.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

Sorcerers are frequently thought to be responsible for these spirits. To combat this, Buddhist or animistic amulets and charms are used as protection against specific ailments, injuries, or misfortune in general. The house spirit (phra phum) is believed to be the most important protection against sickness or other misfortune.

Because of the scarcity of western trained physicians and due to their Chinese cultural inheritance, the Thai usually turns to the herb doctor when sick. Traditional methods of therapy include many home remedies and favored food and herbal mixtures which may be known generally or by a single family. Medicines of the Chinese pharmacist or the drug peddler who occasionally comes to the village are also popular. In many areas Buddhist monks serve as medical therapists; they either use traditional medicines or, like the spirit doctor, rely on animistic ritual cures. Some monks are skilled in the ancient medical techniques, although the rules of the Order forbid them curative practices. The monks' use of ritual shows its strong admixture in the Thai Buddhist practices; surgery is distrusted because of the Buddhist teaching that the body should not be cut.

Childbirth in the villages is handled by midwives, most of whom are schooled only in the use of traditional methods and instruments. Their equipment generally consists of a sharpened bamboo stick, which is used to cut the umbilical cord, and a tree root (plai) on which the cord is cut. Childbirth usually takes place in the home. As a result of these practices, it is not surprising that complications of childbirth are among the leading causes of death and that the infant death rate is unusually high.

Despite this, traditional medical beliefs and practices on the whole do not pose a serious block to the introduction of modern medical techniques. The villager in Thailand is open to suggestion and willing to accept new ideas about disease, provided that they prove obviously useful. Patients often go to modern doctors when the local practitioner has been unsuccessful (often too late to effect a cure) or when the disease is recognized as one which modern medicine will cure. Injections are popular since the villager has learned from experience that for some illnesses they give quick and dramatic recovery. The local practitioners are also willing to try modern therapy and most of them are ready to acknowledge the superior techniques of the modern doctor and to recommend serious cases to him. Furthermore, the villager already takes such modern medicines and drugs which are available on the market if they seem to cure more quickly or effectively than the old traditional remedies. He is also willing to accept the immunization provided by the government against endemic diseases recognizing that contagions such as smallpox and cholera should be treated by a modern doctor although the normal Thai will not go out of his way to be immunized against these diseases.

### (3) Sanitation

#### (a) Water

Bangkok has the only piped water supply in Thailand. Villages which rely on well water obtain it from public wells which are usually contaminated due to their poor construction and to lack of sanitary precautions in and around the well because of the common belief that water, by nature, is clean. Drinking water is rarely boiled prior to consumption. The average riverside village obtains its water directly from the adjoining river or stream which likewise is heavily contaminated due to insanitary waste disposal practices. Other rural areas take their water from swamps and canals. In many villages, rain water is collected and stored in large jars.

The provision of safe water supply in rural communities is one of the greatest problems facing Thailand today. The use of contaminated water is responsible for the high incidence of, and deaths from, typhoid fever and dysentery. It likewise contributes to the occurrence of periodic epidemics of cholera.

#### (b) Food

Although legislation governing the purity and sanitation of food has been enacted, it is not effectively enforced. Controls are carried out in an irregular and ineffective fashion. Available information does not indicate that any controls are exercised over the quality of milk or other dairy products. Sanitary inspections of market places and eating establishments take place only infrequently. Food handlers are not required to submit to physical examinations.



SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

Inasmuch as human waste is utilized as fertilizer most fresh foods are grossly contaminated. Results of several surveys have indicated that approximately 95 percent of the natives have one or more intestinal parasite infestations. No locally grown products should be consumed in the raw state without executing the proper disinfection procedures.

(c) Sewage

Neither sewage treatment works nor sewerage systems exist in any part of Thailand. Some of the principal buildings in the larger cities utilize flush toilets which drain into septic tanks but such facilities are rare and the septic tanks are seldom watertight. Box-and-can privies are popular in some sections of the country but by far, the earth-pit privy is the most popular because of the ease with which it can be constructed.

The problem of excreta disposal in rural areas is one of major proportions. Privies or latrines are difficult to construct owing to the high level of underground water and to floods. Very few rural areas have toilets, privies, or urinals. Elimination is in canals or in the garden fields where the human wastes serve as fertilizer. Although a national law prohibits this latter practice because it results in the contamination of both the soil and plant life which grows in it, the law is seldom enforced or observed.

(4) Medical

(a) Medical Facilities

Thailand as of 1954 had a total of 299 installations for the care of the sick. These installations had a combined bed capacity of 12,600 which allows for 0.72 beds per 1,000 population. Included in this number of medical care installations are 104 first class Medical Centers with a bed capacity of 543 beds. There are also approximately 629 second class Health Centers which have no beds.

Practically all hospital care is provided through government hospitals, the majority of which are located in the northern part of the country with a large concentration in and around Bangkok. However, the government has been far sighted enough to attempt to provide some medical care for all the inhabitants with the result that the Ministry of Health maintains at least one general hospital in almost every one of the 69 provincial towns.

(b) Medical Personnel

Thailand is greatly handicapped by a shortage of doctors, nurses and other health personnel. As of 1954, there were 2,942 physicians in the entire country or one physician to each 5,927 population, a ratio considerably lower than the 1:777 of the United States. At the same time there were 915 midwives, 2,633 qualified or certified nurses, and 1,241 other nursing personnel. As is the case in many oriental countries, the Thai have more faith and confidence in the native herb doctors than they have in those trained in western medicine, with the result that there are approximately 35,000 practitioners of native drug or herb medicine in the country. Also as might be expected, the western trained doctors tend to congregate in the larger cities and towns and leave the rural areas almost completely at the mercy of the herb doctors.

In recent years there has been improved liaison between the provincial hospitals and the Ministry of Health in Bangkok so that three times a year, a medical team of five doctors from Bangkok tour the provincial hospitals and hold two-day sessions with the local physicians to bring them up to date on medical developments.

(c) Pharmaceuticals

Thailand is greatly dependent upon imports to meet her pharmaceutical requirements. Most of the existing pharmaceutical firms manufacture patent remedies. It has been estimated that approximately 75 percent of Thailand's annual requirements for sulfa drugs and antibiotics must be imported. The Queen Saovabha Memorial Institute in Bangkok is the primary production center for biologicals. It is capable of producing vaccines and sera in quantities sufficient for Thailand's normal needs; however, when epidemics occur such as the 1958 epidemic of smallpox and cholera, this facility has proved incapable of supplying biologicals in mass quantities.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

(5) Diseases

It is difficult to determine the extent of disease in Thailand. First of all, because of the poor reporting system especially from the rural and less populated areas, any statistics must be looked upon as suspect. Secondly, the existing statistics are limited to mortality alone and do not provide morbidity figures. The mortality statistics are registered by the Central Statistical Services on the basis of death certificates. In view of these factors the following tables should act only as a guide, bearing in mind that because of the geography of Thailand some diseases will be more prevalent in certain areas than in others, this is particularly true of malaria.

(a) Diseases of Military Importance

Diseases	Number of deaths		
	1953	1954	1955
Influenza	3,776	3,788	2,566
Encephalitis	82	40	48
Infectious hepatitis	1	3	6
Malaria	21,451	16,473	14,520
Rabies	9	12	20
Louse-borne typhus	52	0	0

NOTE: In addition to malaria, filariasis and dengue fever must also be considered epidemic throughout the country although not being reportable there are no statistics. Thailand has instituted a malaria eradication program which is proving effective, as reflected in the decrease in deaths over the past three years. In 1953, there was an epidemic of typhus which has not reappeared since that time. During 1953, Thailand experienced a severe epidemic of cholera but final figures on the epidemic are not available at this time.

(b) Diseases of Potential Military Importance

Disease	Number of deaths		
	1953	1954	1955
Typhoid fever	1,027	1,176	1,420
Paratyphoid fever	10	14	31
Dysentery	4,768	5,093	4,375
Anthrax	5	0	3
Poliomyelitis	10	8	7
Tetanus	713	689	823
Leprosy	218	32	256

(c) Serious Diseases of Native Population not likely to affect large numbers of Troops

Disease	Number of deaths		
	1953	1954	1955
Smallpox*	50	21	2
Scarlet fever	10	27	13
Strep. sore throat	5	2	14

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

Disease	Number of deaths		
	1953	1954	1955
Diphtheria	482	690	624
Whooping cough	142	65	33
Measles	932	2,040	768
Chicken-pox	140	189	331
Rheumatic fever	9	12	20

NOTE: (\*) refers to cases not deaths; however, in 1958, there was a serious epidemic of smallpox in Thailand, the statistics of which are not yet available.

No statistics are available on the incidence of the venereal diseases but it is common knowledge that all of them, including yaws, are quite widespread throughout Thailand especially in the larger and more densely populated communities.

(6) Animals and Plants potentially harmful to Military Personnel

(a) Carriers of Disease

1. Mosquitoes

Mosquitoes transmit malaria, filariasis, and dengue fever, and particularly during the rainy season, are a source of considerable annoyance throughout the entire country. A total of 21 species of anopheles mosquitoes have been identified in Thailand, 13 of which have been shown to be vectors of disease. The abundance and distribution of these species varies considerably, and are dependent upon topography, season, kinds of water available and effectiveness of the Malaria Control Groups.

Species of anopheles mosquitoes encountered in Southern Thailand:

Species of Anopheles	Breeding Habits	Known to Transmit
A. aconitus	Hill streams	Malaria
A. albotaeniatus	Undetermined	Filariasis
A. annularis	Plains leading to the foothills	Malaria
A. baezaei	Undetermined	Undetermined
A. barbirostris barbirostris	Ditches, marshes and shallow wells	Malaria and Filariasis
A. culicifacies culicifacies	Hill streams	Malaria
A. fluviatilis	Hill streams	Malaria
A. hyrcanus nigerrimus	Ditches, canals, and ponds	Filariasis and probably Malaria
A. hyrcanus sinensis	Ditches and marshes	Filariasis and probably Malaria
A. minimus minimus	Hill streams	Malaria
A. philippinensis	Hills and foothills	Undetermined
A. separatus	Undetermined	Undetermined
A. subpictus subpictus	Muddy, stagnant pools	Undetermined
A. sundaicus	Brackish waters, not disturbed by daily tides	Malaria
A. tessellatus	Undetermined	Malaria
A. umbrosus	Well-shaded swamps	Malaria, filariasis
A. vagus vagus	Plains leading to the foothills, blind channels, open pools	Undetermined

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

Although nine species of *Aedes* have been identified in Thailand, only two species have been identified as vectors of disease: *Aedes aegypti*, which is found throughout the country, is an important vector of dengue fever. *A. albopictus* may be a vector of dengue, for this ability has been demonstrated in other areas of southeast Asia. The presence of *A. aegypti* in Thailand poses the constant threat of a serious disease problem resulting from the introduction of yellow fever into the country.

Seventeen different species of *Culex* mosquitoes have been identified in Thailand.

Six species of *Mansonioides* mosquitoes have been identified in Thailand, all from the peninsular part of the country. Four species have been found to be vectors of filariasis (type *Wuchereria Malayi*). These species are: *Mansonia longipalpis*, *M. indiana*, *M. uniformis*, and *M. annulifera*. Larvae of *Mansonioides* have the peculiar habit of attaching themselves to roots of aquatic plants. The host plants of the larvae of *M. uniformis* and *M. indiana* in Peninsular Thailand have been found to be *Pistia* and *Eichhornia*. The breeding habits of *M. longipalpis* have not been determined.

## 2. Flies

The common housefly, *M. domestica*, is present in Thailand. It is a mechanical vector of disease.

Members of the family Tabanidae (including the horse or deer fly) are found throughout jungle areas. A number of them are sources of great personal inconvenience to persons forced to operate in such areas during the rainy season because their bites itch and swell to such an extent that victims may be temporarily incapacitated.

Six species of sandflies (*Phlebotomus*) have been identified in Thailand: *P. Barrardi*, *P. bailyi*, *P. stantoni*, *P. squamipleuris*, *P. squamipleuris indicus*, *P. papatasii*. Various species of *Phlebotomus* are vectors of pappataci fever leishmaniasis in Thailand. *P. papatasii* is regarded as the usual vector of pappataci fever. This species breeds in cracks and crevices in walls, in cellars, banks of streams, trenches, etc. where darkness, dampness, and organic matter are found.

## 3. Lice

Three varieties of lice which are associated with human beings are found in Thailand: the head louse (*Pediculus capitis*); the crab louse (*Phthirus pubis*); and the body louse (*Pediculus corporis*), which is the vector of one form of relapsing fever in Thailand. A rat louse (*Polyplax spinulosa*), although it is not known to bite man, is of medical importance because it transmits murine typhus fever from rat to rat.

## 4. Fleas

The rat flea (*Xenopsylla cheopis*), probably is the chief vector of plague although another rat flea, *X. asiatica*, has been incriminated in the past as a vector in small outbreaks of this disease.

## 5. Ticks and Mites

The itch mite, *Sarcoptes scabiei*, is encountered in Thailand, especially in the rural areas. It is highly probable that species of *Trombicula*, the larval form of which is the vector of scrub typhus fever, occur in jungles and fields. Scrub typhus occurs in neighboring Burma and Malaya, and outbreaks have been reported from Thailand from areas where jungle was being cleared.

### (b) Other harmful Animals

#### 1. Reptiles

Thailand abounds in many varieties of reptiles. Marshes and streams, particularly in the peninsular part of the country, are often infested with crocodiles. *Crocodilus porosus*, is common in the lower course of rivers. This species is known as a man

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

killer. The reptile Alligator siamensis, inhabits rivers, lakes, and swamps. Although it sometimes attains a length of twelve feet, it seldom attacks humans.

## 2. Spiders, Scorpions, and Centipedes

Spiders, scorpions, and centipedes are numerous in Thailand. These insects prove troublesome from a standpoint of personal inconvenience.

## 3. Snakes

Many species of snakes, both land and sea, are native to Thailand. The following discussion is limited to the more dangerous species.

Among the pit-vipers, two species of Akistrodon and six species of Trimeresurus have been identified. The former are grey or reddish-brown above with pairs of large dark brown spots along the dorsal surface. Of the genus Trimeresurus, the most common is Trimeresurus gramineus, the green pit or bamboo viper. This species, given to hiding in trees, usually can be identified by its dark green back, but it may also be olive or yellow. Its venom is hematoxic.

The kraits, coral snakes, and cobras native to Thailand, which have eurotoxic venom, include the following indigenous species: the banded krait (Bungarus fasciatus), which though most common is not regarded as very dangerous, the Indian krait (B. candidus) and B. flaviceps which although probably dangerous are rarely encountered; and the common Indian cobra (Naja Naja) and the king cobra (Naja hannah), of which the former rarely becomes more than five feet in length and is distinctly brown in color with characteristic "spectacles" on the back of the head, while the latter is usually about 13 to 15 feet long, with a very small hood and slender body (2 1/2 inches diameter) but with the reputation of being the most dangerous of all land snakes because of the amount and the extreme toxicity of its venom and its unpredictable behavior.

Seventeen species of sea snakes have been identified in Thai waters. All of these snakes are poisonous, some are very deadly. In general, Thai sea snakes do not exceed 43-52 inches in length. They are most frequently encountered in shallow waters, especially near the mouths of rivers. On calm days, great numbers of them can be seen basking on the surface of the water. It has been alleged that sea snakes cause more deaths than land snakes.

## 4. Fish

Fresh water fish that serve as the second intermediate hosts of Clonorchis sinensis, Opisthorchis felinus, and the intermediate host of Gnathostoma spinigerum, (a species of intestinal worms) are found principally in the northeastern sector. Fish of the family Cyprinidae are responsible for harboring the first two parasites mentioned while Varias batrachus and Chicephalus striatus have been identified with the transmission of gnathostomiasis (infestation with worms of the genus Gnathostoma).

## 5. Rodents

Many different kinds of rodents and rodent-like animals are found. Rats are a constant source of concern because of the endemicity of plague and occasional cases of murine typhus, leptospirosis, and ratbite fever. The field mouse, Leggada (Mus) rehensis, is present, and may play an important part in the transmission of scrub typhus fever.

## 6. Other Animals

Frogs and eels commonly sold in fish markets are very likely to harbor larval gnathostomes and are another source of gnathostomatic infection in Thailand.

Wild elephants, one and two horned rhinoceroses, and boars of great size inhabit the jungles. Tigers, panthers, jackals, wild dogs, and bears also are present. Among the most dangerous wild animals are the wild water buffalo, wild ox, and Indian bison, which are known to charge at sight.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

(c) Harmful Plants

No precise information is available concerning the locale of poisonous flora in Thailand. Poisonous rengas and mango trees are known to grow in the country. Rengas trees exude a very dark sap which produces blisters upon contact with the skin. A few of the wild or semi-wild forms of mango also have poisonous sap, although the common mango does not. Seeds from the fruits of the shrub Strychnos Nux-vomica are poisonous. The fruit resembles small oranges, and the seeds are the source of the poison strychnine.

(d) Principal sources

1. Political and social

Blandhard, W: Thailand: Its People, Its Society, Its Culture, New Haven, HRAF Press, 1957. (UNCLASSIFIED)

Foreign Office and Ministry of Economic Warfare, Economic Advisory Branch: Siam Basic Handbook, London, 31 March 1945. (RESTRICTED)

National Intelligence Survey, Thailand - Volume III, Washington, 1952-1954. (SECRET)

National Intelligence Estimate, Thailand, Washington, 11 July, 1958. (SECRET)

2. Medical

Siam - Land of Free Men by H.G. Deignan, Published by Smithsonian Institution, 1943.

Health Progress of Thailand, ICS, 1953.

East Asia Area and Language Army Specialized Training Program, University of Michigan, 1943-1944.

Siam Directory.

Crossroads by Sir Joshiah Crosby, London.

World Trade Information Service, U.S. Dept. of Commerce "Economic Facts").

Dept. of State Fact Sheet (1950); Thailand; Its People and Economy.

ARMA Australia DA Intelligence Report R-128-55 of 4 May 1955.

ARMA Bangkok DA Intelligence Report R-402-55 of 16 December 1955.

ARMA Thailand DA Intelligence Report R-223-58 of 13 May 1958.

MIS Thailand, Section 42 (CONFIDENTIAL).

MIS Thailand, Section 45 (CONFIDENTIAL).

World Health Organization Annual Epidemiological and Vital Statistics, 1955.

SECRET  
GENERAL SECURITY MATTER  
NOT FOR DISSEMINATION TO FOREIGN NATIONALS

I-II CHARACTERIZATION OF THE AREA

1. Military Geography

- a. Terrain
- b. Beaches
- c. Climate and weather
- d. Beaches and landing beaches
- e. Land and Naval Facilities
- f. Air Facilities
- g. Urban Areas

2. Transportation and Communications

- a. Rail
- b. Highway
- c. Inland Waterways
- d. Telecommunications
- e. Air
- f. Maritime

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

## 1. MILITARY GEOGRAPHY

### a. Terrain

#### (1) General

Relief and extreme seasonal contrasts in drainage exert a dominant influence on military operations in Thailand. Military operations would be difficult during the rainy season (May to November) because of widespread flooding on the broad lowlands of central Thailand. The Khorat Plateau is also subject to flooding during this season, but the extent and duration is less than on the central lowlands.

Within the mountainous terrain of peninsular Thailand and on the western and northern parts of the mainland, steep slopes, rough topography, dense vegetation, and to a limited extent, flooding, would hamper military operations by preventing or channelizing cross-country movement and by making military construction difficult.

Wet, unstable soils and low dikes of paddy lands in central Thailand, along the coast of the peninsula, and on the Korat Plateau would hinder military operations throughout the year. Cross-country movement would also be difficult in these areas. Along the eastern and western borders of the central lowlands and on the stream divides of the Khorat Plateau, where the paddy lands are less extensive, conditions are favorable for military movement. The lack of dense vegetation throughout the lowlands and on the Khorat Plateau however, make conditions unfavorable for concealment.

Conditions for military construction are moderately suitable on the lowlands and on the Khorat Plateau. Little grading would be necessary for roads or airfields, and the terrain is free of obstructions to air approach at potential airfield sites. Soils, however, are generally unstable and are unsuited for engineering purposes. During the wet season, protection against flooding would be necessary. Because of the flooding, the lowlands and the plateau are poorly suited for all types of underground installations except for a few sites which are suitable for shallow bunker-type installations along the border of the central lowland and on the broad stream divides of the Khorat Plateau. Construction materials from unconsolidated sands and gravels are available in moderate quantities on the plateau and lowlands.

In the mountainous areas military construction involves difficult engineering problems. Road construction entails large amounts of grading and the rough terrain makes numerous curves and steep grades necessary; only on the broad basins within the mountains are there areas suitable for airfields and roads. Construction materials derived from bedrock and timber are abundant. Within the mountains there are numerous sites for tunnel-type installations.

Water supply throughout Thailand presents no serious military problems. While surface supplies vary greatly according to the season, both in quantity and quality, dependable supplies of ground water in moderate to large quantities can be obtained at shallow depths throughout most of Thailand.

#### (2) Descriptive Analysis

Thailand consists of two distinct entities, a mainland mass and a long peninsula extending south from the western side of the mainland. High, rugged, north-south trending mountains dominate the western and northwestern sections of the mainland and extend along parts of the peninsula. The eastern part of the country is a rolling plateau which is drained by a fanlike system of streams converging eastward to the Mekong River.

Between the mountains and the Plateau is a broad plain which contains numerous streams flowing southward from the mountains toward the Gulf of Siam. Scattered throughout the northern mountains, particularly toward the east, are flat-floored basins and broad valleys, several of which continue southward and merge into the plains of central Thailand. These plains which include scattered hills and ridges, in turn merge southward into the large flat delta, the bulk of which is paddy land. Hilly and mountainous areas also occur in the southeast mainland and the head of the Gulf of Siam and in parts of the southern half of the peninsula.

#### (3) Drainage Characteristics

There are three major drainage areas in Thailand: the central Thai mainland, which



SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

drains south into the Gulf of Siam; the eastern plateau sector of the mainland, which drains into the Mekong River; and peninsular Thailand. None of the rivers in the country are more than 300 miles long.

The Mae Nam Chao Phraya has the largest discharge of any river that is completely within the boundaries of Thailand. It is formed by the confluence of the Mae Nam Ping and the Mae Nam Kan at Chiang Makhon Swan. The river is 250 miles long and it flows southward into the Gulf of Siam. Within each of the drainage areas of Thailand there are a number of subordinate drainage features. These include lakes, swamps, and canals.

#### (4) Water Resources

Enormous supplies of surface water are available in most of Thailand from May to November, but at other times supplies are meager except along the lower courses of large rivers. Practically all the surface water is bacterially polluted, and in the mountainous area along the peninsula chemical pollution from mine wastes is common.

Supplies of ground water are generally available throughout the country in all seasons. Wells can be dug or drilled almost everywhere, with the exception of limestone areas in the mountains, and springs are common in the hills and mountains. The quality of ground water varies with the source rock and water well locations.

#### (5) Rock Types

The rocks of Thailand are in three major categories: hard massive rocks, chiefly in the western and peninsular mountains and hills; hard and soft rocks in the plateau in eastern Thailand and some of the mountains and hills; and soft rocks and unconsolidated sediments in basins and in river valleys.

#### (6) Vegetation

Forest covers about 60 percent of Thailand. The two most important types are deciduous forest and tropical evergreen forest. Minor types, largely evergreen, include mangrove forests and pine-oak forests. The remaining 40 percent of Thailand consists of grassland and cultivated land.

#### (7) State of the Ground

In Thailand, which is well within the tropics and lies in the path of the monsoons, the state of the ground throughout the year generally exhibits two distinct conditions. From May through October the ground is predominately wet and from November through April it is generally dry.

Paddy fields, irrigation and drainage ditches, canals, walls, embankments, mines, and quarries are common cultural features in Thailand. Most of these features occur in the low flat areas, especially in the central plains and the delta in the south-central Thai mainland.

Paddy lands cover most of the delta, are extensive in central plains, and also occur along streams in broad valleys throughout the country and in many coastal areas. These paddy lands consist of a mosaic of small fields of various shapes separated by low earth dikes. The fields are flooded from three to six months during the spring and summer of each year, generally to the depth of four to eight inches, but in parts of central Thailand they are flooded six to ten inches deep. During the remainder of the year, the fields are dry and hard.

Irrigation ditches, drainage ditches, and canals form a complex network in areas of paddy lands and are also present in other low flat land, including gardens and orchards. The canals are 50 to 60 feet wide. These canals connect major streams and serve as important transportation routes. In addition, some of the major urban areas, such as Chiangmai, Nakhon Ratchasima, and Bangkok, have waterways which formerly served as moats around the original limits of the city. In places these moats are backed by walls; the wall in Bangkok is 15 feet high and three feet thick.

#### b. Oceanography

##### (1) General

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

The Gulf of Siam occupies a broad, submerged depression that is very slowly filling with alluvium. The depression is bordered on the east and west by partly submerged ranges of hills or mountains which extend in a general north-south direction. Where the ranges of hills or mountains extend beyond the shoreline, they make up chains of islands. These islands, many of which are widely separated, lie off most of the Thailand coast.

#### (2) Depths and Bottom

The maximum depth of the Gulf of Siam is approximately 40 fathoms. The majority of water out to 120 miles is only 20 fathoms except the westernmost portion of the Gulf, where depths of 20 fathoms are as close as 20 miles from the coast. In the deeper portions of the Gulf of Siam the bottom sediments are predominantly mud, whereas near the coast and around the islands the sediments are varied sand, mud, and a few patches of rock and coral. The north coast of the gulf includes the entrances to the four largest rivers in Thailand. The large amount of alluvium that is discharged by these rivers is deposited on the shores of this section of coast and in the nearshore waters. The bottom sediment off the west coast of Thailand in the Bay of Bengal is composed of mud, sand, shell, rock, stone, and coral.

#### (3) Tides

The tides of the Gulf of Siam are largely semi-diurnal, although there is a large diurnal inequality. At the time of the moon's maximum declination the diurnal inequality is so great that a diurnal tide occurs for three to four days. Tidal ranges within the gulf are variable. In the outer part of the northern end of the gulf, just inside the entrance points, there is a spring range of two to three feet; the spring range on Bangkok Bar, at the head of the gulf, is about nine feet. The tides on the west coast of Thailand are also semi-diurnal, exhibiting a diurnal inequality both in time and in height. The spring rise in the vicinity of beaches varies from eight to eleven feet, the near rise from six to seven feet varies.

#### (4) Currents

Although the tide is generally semi-diurnal, the tidal currents in the Gulf of Siam are diurnal in character, setting in one direction for 10 hours with an intervening slack period of two to four hours. Their velocity ordinarily does not exceed three knots. In general, the velocity of the tidal currents in the coastal waters of the Gulf of Siam exceeds that of the nontidal currents, so that the flow changes direction according to the tide. The only exception is that during the height of the northeast or southwest monsoon a strong wind-driven, nontidal current is found in some of the coastal areas. During these periods the tidal current will be irregular. There is comparatively little reliable information concerning the tidal currents off the west coast of Thailand, so it is difficult to arrive at an accurate overall picture. At the head of the gulf during the northeast monsoon there is frequently a strong set to the west, whereas during the southwest monsoon the non-tidal currents set outward from the head. The monsoons also seem to have the effect of causing the non-tidal currents near shore to be much stronger than those in the middle of the gulf. Off the west coast of Thailand the non-tidal currents present a very confused picture. In addition, the numerous islands that fringe the coast cause the current patterns to be broken up into numerous small eddies of varying directions.

#### (5) Sea and Swell

The Gulf of Siam is south of the major typhoon tracks and the paths of the extra tropical continental depressions of winter. It is also well protected from the winds of both monsoons by its bordering land masses. Accordingly the frequency of calm to slight (three feet) seas is high during all seasons. During February only three percent of the seas are greater than five feet in height. In May the frequency of such seas is even lower. The variable winds and squalliness of August, which precede the onset of the winter monsoon, cause the least favorable sea conditions of the year, the frequency of seas over five feet in height rising to about five percent. Data on swell conditions in the Gulf of Siam are sketchy; however all available sources indicate the predominance of low swell conditions during all seasons.

#### c. Climate and Weather

##### (1) General

##### (a) Introduction

SECRET

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

### 1. Over-all Climatic Description

Thailand, extending from approximately six degrees to slightly over 20 degrees North latitude, displays for the most part a monsoonal climatic regime. The seasonal shift of prevailing wind direction brings to most of the area marked seasonal variation of precipitation, cloudiness, and general over-all meteorological fitness for military operations. Temperature and humidity, however, are not substantially influenced by the seasonal wind shift, and generally remain high throughout the year. Topographic influences produce considerable regional climatic variation of the weather of any given season.

Thailand is only infrequently invaded by the destructive tropical storms which are common to other parts of southeast Asia. These storms practically never affect interior Thailand but may invade the lower east coast of the peninsula once every several years. Other widespread destructive weather phenomena are rare, although during the wet season much of the lowlands is subject to flooding. Local violent thunderstorms, accompanied by gale winds and, at times, hail, may occur several times each year over the interior.

### 2. Climatic Seasons

Thailand experiences four climatic seasons. In a meteorological sense, the best-defined season occurs from mid-May through mid-September, during which period a steady southwesterly and westerly circulation prevails to above 10,000 feet above sea level. The season is often called the summer monsoon, or southwest monsoon season.

A complete reversal of low-level wind flow takes place from about November through mid-March, at which time easterly and north-easterly winds prevail throughout the country. Over southern Thailand, easterlies predominate to great heights, but over the northern part of the country they give way to westerlies at about 5,000 feet. The circulation during this season is somewhat weaker than during the opposing monsoon. The season is often called the winter monsoon, or northeast monsoon season.

After the withdrawal of the northeast monsoon in mid-March and prior to the onset of the southwest monsoon in mid-May, there exists an interim period with no definite surface wind circulation. This is often referred to as the hot season or spring transitional season. Another transitional season occurs between the withdrawal of the southwest monsoon in mid-September and the onset of the northeast monsoon in November. The transitional seasons may be identified as the spring intermonsoon season and the autumn intermonsoon season.

#### (b) Effect of Topography

To a certain extent, identifiable features of each of the two monsoon systems are modified over certain parts of Thailand by the terrain of the country and of nearby areas. Windward slopes of exposed mountain ranges always receive more precipitation and cloud cover than the sheltered leeward slopes. During the height of the southwest monsoon, some western slopes of the mountains receive precipitation at the rate of over 50 inches a month, but beyond the crest the rain shadow extends eastward across the country, so that most of Thailand experiences less precipitation than would normally be expected for a tropical monsoon country.

The Annam mountain chain of Indochina (Chain Annamitique) to the east also serves to influence the climate of Thailand. During the northeast monsoon, air moving into interior Thailand is forced to override these mountains, providing clearer and drier weather to leeward than would occur in the absence of this barrier. Peninsular Thailand, on the other hand, is more exposed to the full force of this monsoon, particularly the southern part of the east coast. During the southwest monsoon, parts of interior Thailand immediately adjacent to the Indochina mountain chain are subject to much orographic rainfall and clouds.

Adjacent sea areas serve as a stabilizing influence on the climate of the land. In comparison with interior Thailand, both peninsular Thailand and the other coastal regions at the head of the Gulf of Siam exhibit only small seasonal and diurnal climatic variations. Important also insofar as micro climate is concerned is the role played by the character of the ground surface. The areas of dense tropical vegetation, for instance, will exhibit a surface climate widely different from that of regions free of vegetation, other factors being equal.

SECRET

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

## (2) Clouds and Visibility

### (a) Clouds

There is marked seasonal variation of cloudiness over most of the country. The southwest monsoon and the autumn intermonsoon are the cloudiest periods over a major portion of the area, while minimum cloudiness is observed during the northeast monsoon and spring intermonsoon seasons.

Aircraft flying at high levels would quite frequently encounter clouds below the flight level throughout the year over the coastal and peninsular regions. Over the interior, however, they would frequently encounter clear weather during the least cloudy months and overcast, or near overcast, during the cloudiest months.

One of the major considerations to aircraft operating within the surface friction layer is whether they will have sufficient height above the terrain and beneath low cloud cover to satisfactorily accomplish their mission. This factor is extremely important when considering missions in and around the numerous highland regions of Thailand where low clouds frequently obscure the windward slopes. Problems that result from low cloudiness would probably be encountered during the southwest monsoon and intermonsoon season.

### (b) Visibility

Fog and haze occur most frequently over interior Thailand during the early mornings of the northeast monsoon and spring intermonsoon seasons. Apart from these, visibility is generally good except within the heavy rain squalls of the southwest monsoon and autumn transitional seasons. Exposed windward mountain slopes, however, are subject to a high frequency of fog from low, slope-hugging clouds during both monsoon seasons. Smoke and/or dust may occur at times over the interior.

In the absence of clouds, air-to-ground visibility in Thailand is fairly satisfactory throughout the year. Best visibility is probably during the northeast monsoon and the spring intermonsoon season, at which time the air is often crystal clear. During the early morning, however, fog and low stratus are quite common over the valleys of the northern mountains and to a lesser extent over the other valleys. By 0900 LST, ground visibility is generally fair to good. Air-to-ground visibility may be sharply curtailed during afternoon showers, which are rather common near the close of the spring intermonsoon season. Smoke from grass fires, as well as dust, may sometimes be carried into the upper air over the Khorat basin from February through April.

During the southwest monsoon and autumn intermonsoon seasons, air-to-ground visibility, although rarely excellent because of the somewhat hazy equatorial air mass, is almost always satisfactory. Sharp curtailments of air-to-ground visibility would occur only during the rather frequent shower activity. Generally speaking, these showers last less than one hour.

## (3) Precipitation

Because of the shielding effect of the western mountains, the precipitation received over most of interior Thailand during the moist southwest monsoon and autumn intermonsoon seasons is somewhat less than would be normally expected of a tropical monsoon country. An abundance of rainfall still occurs over the area, however, and about 84 percent is received from mid-May through October. The rainiest month over most of interior Thailand is generally September. Over the northernmost regions, the maximum occurs one or two months earlier. Upper Peninsular Thailand observes maximum precipitation in October; the maximum in the lower peninsula does not occur until November or even December.

Precipitation occurs almost exclusively as rainfall. Hail occurs occasionally in connection with thunderstorms but snow has never been reported even in the northern mountains.

### (4) Humidity

Throughout this country, maximum daily relative humidity almost always rises to 90 percent or higher. Minimum relative humidities however, show a distinct seasonal and regional variation. Over the northern interior, average daily minimum humidity varies from about

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

35 percent in March to about 75 percent in August. Over the southern coastal regions, humidities hardly ever fall below 60 percent. Average monthly humidities vary between 57 percent and 84 percent in the north, and between 70 percent and 84 percent in the south.

(5) Temperature

Lying wholly within the tropics, Thailand displays consistently high surface temperatures throughout the year. Mean annual temperatures range from the mid-seventies in the north to the low-eighties in the central and southern regions. Recorded extremes of temperature have varied from 35 degrees to 111 degrees F. Because of the varied topographical features, there exist large micro-climatic temperature variations. The difference in average temperature of January, the coldest month, and April, the warmest month, amounts to about 14 degrees to 17 degrees F. in the northern mountains; 10 to 14 degrees F. in the central and eastern parts of the country; and three degrees F. over the peninsula.

As regards upper-air temperature, the high elevation of the freezing level over the tropics generally precludes aircraft icing below 12,000 feet above sea level.

(6) Winds

(a) Surface Winds

Over interior Thailand, surface wind speeds infrequently exceed 12 mph throughout the year, but over the coastal regions, higher average wind speeds are observed. Coastal regions on the west side of the peninsula and those at the head of the Gulf of Siam observe highest winds during the southwest monsoon, while those on the east coast of the peninsula observe highest wind speeds during the northeast monsoon. The highest surface wind speed ever recorded within Thailand is about 60 mph. It is likely, however, that unrecorded local winds have exceeded this 60 mph speed.

(b) Turbulence

From the spring intermonsoon season through the autumn intermonsoon season, widespread convective activity results in numerous cumuliiform cloud build-ups. Within these clouds and to a lesser extent in the intervening clear air, gentle-to-moderate turbulence can be expected. The convective action is so widespread over the land areas during the afternoon and early evening that it is generally impossible to avoid turbulent areas on flights below 12,000 feet. Minimum turbulence can be expected over land areas after 2200 and before 0800 LST, between which times convective action is at a minimum. Over the sea and coastal areas, light-to-moderate turbulence in large cumulus clouds is said to be greatest between 5,000 and 10,000 feet and to be considerably less below 3,000 feet.

Turbulence may become particularly heavy within the numerous afternoon thunder and squall areas. The huge thundery cloud masses which occur just prior to and during the onset of the southwest monsoon contain areas of extremely violent turbulence. Occasionally large hailstones from these clouds attest to the severe vertical wind speeds within. Severe thunderstorms may generally be avoided over the Gulf of Siam and the immediate coastal areas.

During the northeast monsoon, severe turbulence rarely occurs over interior Thailand except in occasional afternoon thunderstorms. Over the Gulf of Siam and the adjacent land areas, however, light-to-moderate turbulence may be expected in the cumulus clouds between 5,000 and 10,000 feet.

1. Coasts and Landing Beaches

(1) General

Thailand has an approximate coastal length of 1,370 miles, disregarding the off-lying islands and minor coastal indentations. The largest section of Thailand coast borders along the Gulf of Siam; the remaining coastal sections border on the South China Sea, the Strait of Malacca, and the Andaman Sea.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

At the head of the Gulf of Siam near Bangkok, the "Heart of Thailand," approaches are clear but lead through shallow water to muddy shores. The remaining shores along the Gulf of Siam are mostly sandy, with approaches partly encumbered by islands. The portion of coastline lying along the Strait of Malacca and the Andaman Sea is encumbered by many islands and is distinguished by a shore line of heavy mud and silt.

The beaches of Thailand are well distributed along all the coasts except at the head of the Gulf of Siam, where mud flats and poor exits are found. The approaches to most beaches are flanked by islands, and nearly all beaches are fronted at low water by sandy or muddy flats. Beach exits are generally poor. Communications inland are usually very limited, as the inland areas are largely underdeveloped. A very few beaches along the west coast of Thailand are suitable for large scale operations, because parts of the coast are fronted by islands, shoals, and drying flats. NIS 42 - Section 22 was used as the basic guide in this study.

(2) Landing Beaches

Beach #1 (NIS Beach #41) See Encls (37-39 and 41-46) Graphic Section

Centered 3.5 mi. SW of Ban Hua Don between 13° 02'N, 100° 05'E and 12° 35'N, 99°

58'E

LENGTH:

34.0 mi, beach terminated at N end by low marshy point and on S end by rocky point which fronts Ban Hua Hin; portion of beach area in vicinity of Ban Hua Don fronted at mouth of rivers by exposed bars and considered not usable; beach interrupted in several places by stream mouths; 29.5 mi. usable.

WIDTHS:

L.W. 50 to 100 yds; H. W. averages 10 yds.

BEACH GRADIENT:

L. W. to H. W., 1 on 20 to 1 on 40; H. W. zone 1 on 10

APPROACH:

Nearshore bottom slopes gentle to flat; at Ban Hua Hin 6.0 ft. depths 75 yds. off L. W. line; generally, 7.5 ft. depths 250 to 330 yds, 18.0 ft depths 1,750 yds at ends to 3.5 N mi at center, and 30.0 ft depths 1.4 N mi at ends to 6.0 N mi at center, and in isolated area 2 to 10 ft depths reported to lie 25 yds off L. W. line. Sea approach from E appears to be clear except for scattered shoals with depths of 13-16 ft approx 5.0 mi off center of beach; between H. W. and L. W. there are runnels about 2.0 to 5.0 feet deep paralleling shore line; fishing stakes are found off beach; reports state that venomous jelly fish and snakes abound in these waters, particularly at river mouths, and caution is necessary; bottom, sand and mud, with clay seaward.

SURF:

Surf slight to moderate during NE monsoon, and slight during SW monsoon; tidal range approx. 7.0 ft; springs.

MATERIAL:

White sand; covered with debris during NE monsoon; firm in wetted area, soft above H. W.; reported that motor vehicles have driven along beach with ease at low tide.

TERRAIN:

Beach immediately backed by steep bank of hard packed sand and soil 2 to 3 ft. high; in turn, generally backed by sand dunes, scrub-covered or cultivated terrain, and bamboo jungle; area near river probably marshy; at S end, beach immediately backed by sea wall with wide promenade upon it; in turn, backed by resort town of Ban Hua Hin; several other villages are located inland along beach.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

EXITS:

Exits from N half of beach generally by cart tracks and footpaths cut through embankments, and fair-weather roads leading to railway and coastal road 1.5 to 10 mi inland; exits from remainder of beach by tracks and trails leading inland 1.0 mi. near center and approx. 800 yds at Ban Hua Hin to coastal road is an all-weather road between Ban Hua Hin and Ban Chaam; RR runs from Bangkok to Singapore; a telegraph line follows RR; an airfield is located approx. 4.0 mi N of Ban Hua Hin.

Refer: To enclosure (36) for graphic.

\* \* \*

Beach #2 (NIS Beach #42) See Encls (43-46) Graphic Section

Ban Hua Hin, S. between 12° 34'N - 99° 53'E and 12° 31'N - 99° 59'E

LENGTH:

3.4 mi.; terminated on N end by rocky promontory fronted by rocks which expose at L. W. and S end by rocky headland; interrupted near center by small stream; all usable.

WIDTHS:

L. W. 50 to 100 yds.; H. W. averages 10 yds.

BEACH GRADIENTS:

L. W. to H. W., 1 on 20 to 1 on 40; H. W. zone, 1 on 10

APPROACH:

Nearshore bottom slopes mild to flat; 6.0 ft. depths reported 300 yds. off L. W. line; 18 ft. depths 750 yds. at N end to 1,000 yds. off L. W. line at S end. Approach from E clear; nearshore flanked to S by rocky headland; northern portion of beach covered with sharp jagged rocks which expose dangerously at L. W.; a few runnels, rarely over 0.5 ft. in depth, occur between L. W. and H. W.; a coral reef 75 to 100 yds. offshore fronting beach possibly exists; the water off Ban Hua Hin abounds with venomous snakes and jelly fish; extreme caution should be exercised; well constructed fishing traps are approximately 1,000 yds. offshore near S end; bottom, muddy sand.

SURF:

Surf moderate during N. W. monsoon; tidal range approx. 7.0 ft.; springs.

MATERIAL:

White coral sands covered with debris during NE monsoon; firm in wetted area; soft above H. W. line.

TERRAIN:

Beach backed by steep bank from 3 to 15 ft. high; in turn backed by tree covered sand dunes 15 to 20 ft. high extending about 40 yds. inland; dunes backed at N end by rough terrain; dunes at S end of beach backed by mud flats; all in turn backed by jungle and bamboo-covered rocky hills; beach used as a resort and backed with many bungalows which are built on sand dunes; a large European type hotel backs N end of beach and is fronted by a 10 ft. sea wall; approx 1.0 mi. NW of hotel is golf course.

EXITS:

Exits by tracks and trail leading inland from bungalows at back of beach to coastal road about 600 yds. inland and to RR about 800 yds. inland; exits from S end of beach are across mud flats which are probably impassable during rainy season; coastal road is fair weather road; RR runs from Bangkok to Singapore; a telegraph line follows RR; a road that is possibly metalled runs inland from center of beach.

T-II-C

SECRET

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

Refer: To enclosure (36) for graphic.

\*\*\*  
Beach #3 (NIS Beach #23) See Encl (47) Graphic Section

DOI up to FEB 52

Centered 1.0 mi. W of Ban Sattahip at 12° 40'N 100° 52'E

LENGTH:

Bay head beach; 1,600 yds; terminated on N end by steep headland fronted by rocks and on S end by steep coasts; all usable.

WIDTH:

L. W. 170 to 330 yds. H. W. 15 to 20 yds.

BEACH GRADIENT:

L. W. to H. W. 1 on 70 to 1 on 135; H. W. zone, 1 on 15.

APPROACH:

Nearshore bottom slopes mild to flat; 6.0 ft. depths 200 to 300 yds. off L. W. line; 18.0 ft. depths 800 to 1,600 yds and 30.0 ft. depths 1,900 yds off L. W. line. Approach generally clear from SW and flanked by steep headlands fronted by rocks; a small, rocky, tree-covered islet surrounded by coral reef and connected to mainland by a spit that dries at nearly L. W. lies 200 yds. off S portion of beach; sand bars off S end; bottom, sand and mud with some stone.

SURF AND TIDE:

Surf rough during SW monsoon and slight during NE monsoon; tidal currents flow N and S across mouth of bay with velocity of 1 to 2 knots; tidal range approx. 7.0 ft., springs.

MATERIAL:

Sand - firm.

TERRAIN:

Beach immediately backed for 20 to 30 yds by a low strip covered with bushes and trees, in turn backed by barracks area of Thailand Naval Base, in turn backed by jungle-covered terrain.

EXIT:

Exits consist of numerous foot paths leading inland 20 to 30 yds. to road paralleling beach; several roads run inland from this road, connecting with Naval Base 2,000 yds. to E. At northern end one of these roads joins with all-weather road 4,000 yds. inland. All weather road runs between Bangkok and Chanthaburi.

Refer: To enclosure (36) for graphic.

\*\*\*  
Beach #4 (NIS Beach #22) See Encls (49-52) Graphic Section

DOI up to FEB 52

Vicinity of Ban Sattahip between 12° 37'N 100° 55'E and 12° 40'N 100° 54'E

LENGTH:

5.1 mi; beach terminated at ends by headlands fronted with rocks; separated 2,000 yds from S end by rocky headland fronted by rocks; beach between rocky headland and S end of beach partly fronted by rocks and interrupted near S end by pier and 2 slip ways; beach north of rocky headland fronted by coral for about 1,100 yds; 4.0 mi. usable.



SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

WIDTH:

L. W. 65 to 300 yds; H.W. 15 to 30 yds.

BEACH GRADIENT:

L. W. to H. W. 1 on 20 to 1 on 130; H. W. zone 1 on 15.

APPROACH:

Near shore bottom slope steep to flat; 6.0 ft depths 30 to 380 yds off L. W. line; 18.0 ft depths 400 yds to 1.5 N. M. and 30.0 ft depths 2.5 N. M. off L.W. line. Approach from SW through channel between several islands and islets on N and mainland on S; there is also an oblique approach from the W through a clear channel, 550 yds wide, bounded on N by mainland, and by several islands on the S; channel has depths of 15 to 25 ft; rocks and shoals located in mouth of bay; submerged rock with 6.0 ft over it is located 600 yds SSW off Village of Ban Sattahip. S portion of beach fronted by shifting submerged sand bars; numerous fishing stakes are found inside bay; bottom, mud and sand, with stone off head lands.

SURF AND TIDE:

Surf rough during SW monsoon; velocity of tidal currents in bay vary up to 1 knot and move in a complex way in the bay; tidal range approximately 7.0 ft springs.

MATERIAL:

Sand; firm.

TERRAIN:

Southern portion of beach immediately backed by seaplane station, in turn backed by jungle-covered hills; remainder of beach backed by level coastal strip covered with scattered trees, brush, and cultivated area; in turn backed by depression that is probably flooded during wet season; all in turn backed by cultivated areas and wood land rising to heavily forested hills; Ban Sattahip backs NW end of beach; Thailand Naval Base located immediately W of beach.

EXITS:

Exits by road immediately back of beach connecting seaplane station and Ban Sattahip; a road connects Ban Sattahip with an all-weather road 1,400 yds inland; a track runs to emergency landing ground 1,300 yds. inland NE from N side of headland.

Refer: To enclosure (36) for graphic.

\* \* \*

Beach #5 (NIS Beach #19)

DOI up to FEB 52

Vicinity of Ban Phia, between 12° 40'N - 100° 13'E and 12° 37'N - 100° 58'E

LENGTH:

19.0 mi.; terminated on W end by steep rocky coast; E end 3 mi. W of mouth of Mae Nam Rayong; beach separated by rocky points fronted by rocks for 3.5 mi. E of Ban Phia, and by rocky promontory fronted by reef 0.9 mi. from SW end; beach interrupted by numerous rivers and streams; 14.6 mi. usable.

WIDTH:

L.W. 100 to 200 yds; H.W. 50 to 100 yds.

BEACH GRADIENT:

L. W. to H.W. 1 on 20 to 1 on 145; H.W. zone, averages 1 on 15.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

APPROACH:

Nearshore bottom slopes mild to flat; bottom very uneven; 6.0 ft. depths 250 to 1,300 yds. off L.W. line; 18.0 ft. depths 500 yds. to 1.7 N. M., and 30.0 ft. depths 1.0 to 2.3 N. M. off L.W. line. Approach is generally clear from S except as follows: An island surrounded by rocks, lies 1.2 N. M. offshore 3.0 mi. W of E end of beach; isolated rocks lie as far as 1.0 N. M. off the portion of beach 1.5 to 2.5 mi. W of Ban Phla; many scattered rocks, exposed and submerged, considered a danger to navigation, found as far as 1,600 yds. off the portion of beach extending from Ban Phla to 2 mi. E; nearshore bottom, sand and sand/shell; shell farther seaward.

SURF:

Surf rough during SW monsoon; tidal range approximately 7.0 ft., springs.

MATERIAL:

Sand, firm.

TERRAIN:

Beach immediately backed by bush covered sand dunes; in turn backed by dense, jungle-covered swamp land and scrub-covered terrain with scattered areas of cultivated land; a stream parallels coast 100 to 200 yds., behind E end of beach; stream floods in wet season and probably marshy; dunes are backed at W end of beach by jungle covered hills with a few clearings near coast.

EXITS:

Exits from eastern portion of beach are overland to all-weather road about 1.0 mi. inland; from western portion, exits are via footpaths or unclassified roads leading to all weather road about 2.0 mi. inland; all weather road runs along coast between Bangkok and Chanthaburi.

Refer: To enclosure (36) for graphic.

\* \* \*

Beach #6 (NIS Beach #18)

DOI up to FEB 52

Centered 5.0 mi. SE of Rayong, between 12° - 36'N - 101° - 25'E and 12° 39'N - 101° 18'E

LENGTH:

8.8 mi.; terminated on SE end by rocky headlands; beach separated 2.5 mi. from SE end by rocks extending seaward from isolated hill; interrupted by several streams; 8.2 mi. usable; beach continues to NW along a narrow, sandy spit to mouth of Mae Nam Rayong.

WIDTHS:

L.W. 100 to 200 yds.; H.W. 50 to 100 yds.

BEACH GRADIENTS:

L.W. to H.W. 1 on 20 to 1 on 40; H.W. zone 1 on 20.

APPROACH:

Nearshore bottom slopes moderate at W end to mild at E end; 6.0 ft. depths 150 yds. off L.W. line; 18.0 ft. depths 150 to 400 yds., and 30.0 ft. depths 300 yds. to 1.9 N. M. off L.W. line. Approach generally clear, except for rocks and shoals as follows; rock dries at L.W. 2.5 N. M. SW of E portion of beach; rock with 6.0 ft. over it lies 3.2 N. M. W of E end of beach and 1.7 N. M. offshore; rock with 6.0 ft. over it lies 0.5 N. M. off center of beach; rock with 14 ft. over it lies 0.8 N. M. off beach 5.4 mi. from SW end; bottom, sand and shell.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

SURF:

Surf rough during SW monsoon and slight during NE monsoon; tidal range approximately 7.0 ft., springs.

MATERIAL:

White sand; firm in wetted area; soft when dry.

TERRAIN:

Beach immediately backed by scrub-covered sand dunes extending 350 yds. inland at center of beach and 70 yds. inland at western end; in turn backed by stream beds, 100 to 200 yds. wide, running parallel with coast, and sandy scrub-covered terrain with scattered patches of cleared land; stream beds are probably sticky or swampy all year around; several villages lie behind beach along all-weather road which parallels coast approximately 1.2 mi. inland.

EXITS:

Exits cover sand dunes to foot paths leading to all-weather road about 1.2 mi. inland; all-weather road runs between Bangkok and Chanthaburi; near E end of beach two unclassified roads lead inland from beach.

Refer: To enclosure (36) for graphic.

\* \* \*

Beach #7 (NIS Beach #32)

DOI up to FEB 52

1.5 mi. S of Ban Bang Lanuing, between 12° 53'N - 100° 54'E and 13° 05'N - 100° 53'E.

LENGTH:

L.W. varies from 200 yds. at N end to 1,400 yds. at S end; H.W. averages 20 yds.

BEACH GRADIENT:

L.W. to H.W., 1 on 75 to 1 on 600; H.W. zone, 1 on 15.

APPROACH:

Nearshore bottom slopes mild to flat; 6.0 ft. depths 300 to 1,200 yds. off L.W. line; 18.0 ft. depths 1,400 yds. to 1.9 N. M., and 30.0 ft. depths 1.0 to 3.0 N. M. off L.W. line. Approach from W and NW clear except for small islet surrounded by shoals 6.0 N. M. W of center of beach, and a shoal with 12 ft. over it 1.0 N. M. S of N end of beach; fishing stakes are likely to be found off this coast; bottom sand, pebbles, and mud.

SURF:

Surf rough during SW monsoon, slight during NE monsoon; tidal range approximately 7.2 ft., springs; the flood stream sets N and the ebb S.

MATERIAL:

Sand; firm.

TERRAIN:

Beach is generally backed by low, flat, comparatively open terrain consisting of clearings and cultivated patches among belts of dense woodland and scrub; for 1.0 mi. N of northernmost stream, beach is immediately backed by sand dunes sparsely covered with patches of scrub; dunes extend 70 to 150 yds. inland; there are several villages along coast immediately inland from beach.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

EXITS:

Exit from beach by narrow tracks leading inland from villages to all-weather road approximately 500 yds. inland from S and center portions of beach and 2.5 mi. inland from N end; cross-country movement possible with little difficulty; all-weather road runs along the coast from Bangkok to Chanthaburi.

Refer: To enclosure (36) for graphic.

\* \* \*

e. Ports and Naval Facilities

(1) General Considerations and Operational Characteristics

Thailand has two coasts, one fronting the Gulf of Siam; the other along the Bay of Bengal. Thailand's physiography does not favor the development of sea ports. The coastline has few deep indentations for natural harbors and shallow approaches to the shoreline often cause navigational difficulties. There has been a constant tendency toward creation of river ports, but even their development is handicapped by sand and mud bars which accumulate at river mouths in this area. Sheltered anchorages are also limited and are generally available only in the lee of several islands in the Gulf of Siam.

Bangkok, the capital, is Thailand's principal port. Centrally located, about 25 miles upstream from the head of the Gulf of Siam, the port handles most of Thailand's foreign trade. It is also an important transshipment center served by several national roads, rail lines and an extensive network of inland waterways.

Numerous minor ports and landings handle a large portion of Thailand's exports of tin ore, rubber, and lumber. None of these ports have alongside berthing facilities for sea-going vessels and cargo must be handled from anchorage by lighters and small river boats. Most of the ports have road or rail clearance.

(2) Summary of Ports & Naval Facilities

(a) Major

1. Bangkok (Krung Thep) (13-45N, 100-30E)

See Enclosures ( 66 - 79 ) graphic section.

Bangkok's harbor occupies a 10-mile stretch of the Mae Nam Chao Phraya (Menam River). Width of the harbor varies from 100 to 610 yards. Depths in midstream range from 36 to 73 feet. Entrance to this inland harbor is handicapped by a bar at the mouth of the river which limits access at mean low water to vessels drawing 27 feet or less.

Khlong Toei terminal is a concrete wharf with a usable length of 1,650 meters, and with minimum depths of 26-29 feet. Numerous small landings comprise a total of about 5,000 feet, but their terminal facilities are, in general, old and poorly constructed.

There is approximately 933,750 square feet of covered storage space in the port area, including the 446,750 square feet of the Khlong Toei Wharf. In addition, about 1,000,000 square feet of open storage is available behind the warehouses.

Practically all of the ships of the Royal Thailand Navy are based at Bangkok which is the site of the Naval Dockyard, located across the river at Dhon Buri. This yard has drydocking facilities capable of handling ships up to destroyer escort size and is the principal supply facility for the RTN.

The military port capacity in Bangkok is estimated to be 7,200 long tons per 20-hour working day.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

DCI up to 30 January 1959

NAME OF PORT: Port of Bangkok (Khlong Toei)

Lat.: 13° 42' N

Long.: 100° 33' to 100° 35' E

H.O. Chart Refs. #: RTN Hydrographic Dept. Charts # 12 and # 35; or USN H.O. Charts # 3141 and # 3142

NAVIGATION:

Channel Depth (LLW): 20.7'

Channel Width: 100 meter minimum

Harbor Depth (Minimum): 11 meters alongside; 11.5 meters in stream

Tidal Range:

SPRINGS

NEAPS

RTN Area:	4.46'	3.24'
Port Area:	5.10'	3.55'
Bangkok Bar:	6.43'	4.33'

Quarantine Anchorage Area: Lat.: 13° 35'35" N Long.: 100° 35'50" E

Ammunition Anchorage Area: Lat.: 13° 42' Long.: 100° 33' to 100° 35' E

Channel/Harbor hazards or obstructions: Bangkok Bar and sharp bends in River are only restricting factors in calling at Port of Bangkok. Vessels of 565' in length and having 27' draught may navigate Mae Nam Chao Phraya River to Port of Bangkok (Khlong Toei) safely.

PILOTS:

Are Pilots available?: Yes

Are Pilots compulsory?: Yes

Pilot Pick-up point: Lat.: 13° 24'03" N Long.: 100° 35'00" E

The Pilot Vessel is anchored in 7.1 meters (23'4") of water in a direction of 207° distance about 5,050 meters from the Bangkok Bar Lighthouse and has a flashing white light every three seconds, which is normally visible seven miles. Pilot Vessel is 90' long, concrete, hull painted black and white checks, superstructure painted white.

Are Pilots available day and night?: Yes. If tide permits crossing Bangkok Bar, Pilots will bring vessel up-river to Port of Bangkok (Khlong Toei) at night.

COMMUNICATIONS:

PORT AUTHORITY OF THAILAND

Radio (CW) Call Sign: H32 KCS: 500

Voice Call Sign: - - KCS: - -

Times Guarded: 2300Z to 1700Z (0600 local to 2400 local)

COMMUNICATIONS:

JUSMAB, THAILAND:

Radio (CW) Call Sign: H.A. KCS: 7700

Voice Call Sign: Hotel Alfa KCS: 7700

Times Guarded: Radio (CW) is guarded TWENTY-FOUR hours daily.

T-11-14

SECRET

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

Voice is guarded between hours of: 0030Z and 0930Z (0730 local to 1630 local), Monday through Friday ONLY.

The COMMUNICATIONS referred to above is the JUSMAG, Thailand Signal Net, and the building housing this installation is located at JUSMAG, Thailand Headquarters on Sathorn Road, Bangkok.

MOORING BUOYS: NONE at present; below is planned installation for 1959-1960.

Capacity: 19,000 GRT

Type: Lambert Garand Patent Buoy (Reversible)

Water Depth: 32'

PIERS or WHARVES: (GENERAL CARGO PIERS)

Name or Number: Port of Bangkok (Khlong Toei). Has 1660 meters of reinforced concrete wharf, or NINE berths of 500' in length.

Length (alongside): No pierside restriction as to length of vessel.

Width: No width restrictions known.

Alongside Depth: 26.3' to 29.5' below M.S.L.; and is being constantly dredged to attain a depth of 37.7' below M.S.L.

Ht. of Deck above MLW: 6.73 meters (22.1')

Lights on Pier: Yes

Rails on Pier: Yes. Wharf is rail served with double tracks and has an apron 16 meters wide providing 12 "Ardelt" electric semi-portal, level luffing, traveling cranes. (Rails reported in state of disuse. DOI June 1959).

Potable Water available: Yes. Water camel (100 tons max.) and pipelines at wharves provide 15-20 tons max. per hour. However, water should be boiled or otherwise treated prior to use.

Bunkers: Delivered alongside by railway on wharf or by lighters. Ships taking bunkers in Thailand must obtain an export license and pay about 10% duty. This, coupled with the 10-15% higher prices due to the necessity for uneconomical operation of small tankers, makes bunkering cost prohibitive. Ships only bunker here in case of emergency and none of the oil companies are organized for extensive bunkering. Considerable advance notice must be given to arrange for bunkering unless it is possible to come alongside the oil company wharves.

Shell Oil Company: (FUEL OIL): Bunker, 3200 EWT\*stock; 50 EWT per hour alongside; and/or 25-30 EWT by lighter per hour.

Stanvac Oil Company: (FUEL OIL) Bunker, 83,300 Bbls. stock; 60-70 tons per hour alongside; and/or 50 tons per hour by lighter.

Diesel Oil:

CALTEX: H1-Speed grade; stock of 27,000 Bbls.; 700 Bbls. per hour alongside or 1100 Bbls. per hour by lighter.

SHELL: H1-Speed grade; stock of 1400 EWT; Deliver 50 EWT per hour alongside; Industrial; 5300 EWT stock; deliver 25-30 EWT per hour by lighter.

STANVAC: H1-Speed grade; 13,300 Bbls. stock; deliver 60-70 tons per hour alongside; Industrial; 95,100 Bbls. stock; deliver 50 tons per hour by lighter.

\* Estimated Weight-Tons

T-11-15

SECRET

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

#### POL PIERS:

The three major oil companies in Thailand each have POL piers, and information is furnished as follows:

<u>COMPANY</u>	<u>LENGTH BERTH</u>	<u>WATER DEPTH</u>	<u>SHIP LENGTH RESTRICTION</u>	<u>TYPE PRODUCT RECEIVED</u>	<u>NUMBER OF TANKS AND TOTAL CAPACITY</u>
<u>SHELL</u>	100 meters	16'LLW	485'	AvGas;MoGas;Diesel and Fuel Oil	21 Tanks; 57,896 Bbls.
<u>STANVAC</u>	100 meters	16'LLW	450'	AvGas;MoGas;Diesel and Fuel Oil	20 Tanks; 295,184 Bbls.
<u>CALTEX</u>	24 meters	10'LLW	450'	MoGas;Diesel Oil;	5 Tanks; 172,000 Bbls.

The companies have lighters as follows;

SHELL: Dumb lighter of 192 EWT (Estimated Weight-Tons); max. discharge 25-30 tons per hour.  
Dumb lighter of 97 EWT; max. discharge 15 tons per hour.

STANVAC: Dumb barge of 500 tons, max. discharge 50 tons per hour. This barge usually utilized for industrial contract deliveries but in emergency could be used for bunkering.

CALTEX: 1 self-propelled barge of 650 tons, max. discharge 200 tons per hour;  
1 Dumb lighter of 400 tons, max. discharge 100 tons per hour.  
CALTEX has one slow-speed diesel ocean going tug of 285 HP and 16 Knots.

#### HANDLING EQUIPMENT:

General summary of pier cranes, conveyors, etc.: The Port of Bangkok (Khlong Toei) has eight 3-ton semi-portal, level luffing, traveling cranes, the numbers of these being #1, 2, 5, 6, 7, 8, 11, & 12 and are numbered with black numerals; and has four 5-ton cranes of the same type, the numbers of these being #3, 4, 9, & 10, which are numbered with white numerals. As all of these cranes were erected in 1955, they are considered to be in excellent condition.

There are a few shipyard cranes, lifting from 40 tons down to 2 tons, but none of these are located at the Port of Bangkok (Khlong Toei).

#### FLOATING CRANES:

Although there are a few floating cranes in the Bangkok vicinity, none of these are available at the Port of Bangkok. They are owned by the Royal Thai Navy and by commercial companies.

#### FLOATING EQUIPMENT:

Tugs: Two tugs available at Port of Bangkok. One of 550 HP and one of 250 HP. Although there is ample room to maneuver in channel, tugs are normally used by ocean going vessels to assist in berthing, leaving the wharf and in turning in mid-stream.

Lighters: There are twenty-two lighters of 130-600 ton capacity; and forty-four lighters of 140-540 ton capacity.

#### POTABLE WATER AVAILABLE: (See PIERS or WHARVES)

By barge: By water camel, 100 tons per hour maximum.

Alongside: Pipelines at wharves, 15-20 tons per hour maximum.

Cost per gallon or ton: Per 15 per ton (75¢ per ton)

DRY DOCKS: As concerns repair yards, the Bangkok Dock Company makes hull repairs, running repairs and limited turbine repairs; the RIK Dockyard makes IC and electrical repairs; and private contractors make running or emergency repairs. Extensive repairs are usually made at Singapore or Hong Kong.

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

Length: Bangkok Dock, 367' on floor; 377' on top, with gate. RTN Dockyard 448' (136.4 meters) with gate.

Width at Entrance: Bangkok Dock: 52'; RTN Dockyard: 32'3".

Depth over Sill: Bangkok Dock - none shown. RTN Dockyard: 3.7 meters (12.1').

AUTHORITIES AVAILABLE:

<u>U.S. Consul:</u>	Yes
<u>U.S. Army:</u>	Yes (Army Attache and Army Section, JUSMAG)
<u>U.S. Navy:</u>	Yes (Navy Attache and Navy Section, JUSMAG)
<u>Quarantine Officials:</u>	Yes
<u>Immigration Officials:</u>	Yes
<u>A.B.S. Officials:</u>	Yes (Mr. DONALD KNOTT, Phone Bangkok: 31717 or 31704)

LIST BEACHING AREAS:

None.

GENERAL INFORMATION:

What is the (L), (W), (D) of the largest ship to be accommodated this port?

563' Length (PRESIDENT COOLIDGE); Width: 76'; and vessel with deepest draft: PERMA, draft: 26'09".

Are ships carrying ammunition allowed to enter port? If the ammunition is destined for this port, YES.

What is geographic location of ammunition discharge berth: It may be unloaded at any point at the Port of Bangkok (Khlong Toei).

Are ships allowed to enter port, discharge general cargo if ammunition destined for next port is a part of the cargo? NO. Ammunition bound for another port of call must be unloaded at the breakwater. It is off-loaded onto lighters at the Bangkok Bar; and after vessel has discharged and loaded cargo, and returns to the Bangkok Bar, ammunition is reloaded from the lighters.

May ships enter this port day and night? Only restriction on entering port is the depth of water at the Bangkok Bar. If tide permits vessel to cross at night, pilot will bring it up river to Port of Bangkok - day or night.

Is this a "First Port of Entry"? Yes. Although there are facilities and Customs Officials located at Koh Sichang, the Port of Bangkok is considered a "First Port of Entry".

Are there special port/harbor rules or regulations? The only "special regulations" of which this office has copies is Quarantine Regulations.

Are there rails and highways leading from port? Yes. Port railway connects to Bangkok rail terminus, and makes connections with rail lines to interior of Thailand, Malaya, and Cambodia. Highway leading from port connects with main highway net in Bangkok that serves the country.

(b) Minor See Encl (52) Graphic Section

1. Sattahip Port, Naval Base (12° 39'N, 100° 52'E) DOI Oct. 1955

LOCATION: The harbor is in the northern part of Ao Sattahip (Bay) between the islands of Ko Tao Mo and Ko Phra Yai. The naval station piers and workshops are located on the mainland immediately N of Ko Phra Yai. The oil fuel depot and oiling jetty are at the NW end of Ko Phra Yai. A small torpedo depot and gun-testing range are located on the NE end of Ko Tao Mo.

T-11-17

SECRET



SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

**PHYSICAL CHARACTERISTICS:** The harbor is about 2 1/2 miles long and about 1,000 yds wide with depths of 3 to 4 fathoms in the fairway. Shallow banks extend from the shore, and sandspits from the prominent points of the islands. The principal mainland (storing) jetty extends southward from Laem Thiani immediately N of Ko Phra Yai and is 400 ft long with a 40-ft 'T' head on which is a 5-ton crane. 300 yds NW is a stone jetty, 600 ft long with a 40-ft 'T' head. North of the storing jetty is the naval station in the NW corner of which is the power house. A W/T station with two steel latticed masts lies 300 yds NE of the storing jetty. The oiling jetty at Ko Phra Yai is 270 ft long with a 32-ft 'T' head.

**Construction:** The storing jetty is of concrete; the stone jetty has a concrete extension; the administrative and stores buildings are mainly of brick construction and the power house is of wood.

**Vital Points:** Piers and workshops.

**SIGNIFICANCE:** Sattahip is primarily a naval station, with limited shore facilities giving maintenance for the Royal Thai Navy. The harbor provides anchorage for medium sized ships. Vessels drawing not more than 19 ft can berth at the oiling jetty on Ko Phra Yai. The mainland piers can be used only by small craft. There are no cargo handling facilities. Diesel and furnace oils are stored on Ko Phra Yai (RAAF Target No. 0673/12100/H1). Minor repairs can be made at the naval station workshops. There are no rail connections, but exit is available from the mainland part of the naval base to the main Chanthaburi/Krung Thep (Bangkok) road.

**LANDMARKS:** Coastline: The configuration of the mainland coast and the islands of Ko Phra Yai and Ko Tao Mo.

**Airfield:** Ban Sattahip East Airfield (12100/A2) three miles E.

**OBSTRUCTIONS:** Hills on the mainland rising to 932 ft, about 3 nautical miles NE of the main installations of the base.

Two masts, (180 ft) at the W/T station on the hill, about 280 yds NE of the eastern mainland jetty.

A W/T mast on Ko Phra Yai.

**GENERAL REMARKS:** A fishing village, Ban Sattship, is located on the N shore of Ao Sattahip, about one nautical mile E of the main naval base installation. Light stores could probably be handled across the beach in the area of the village. Good road exit is available. A coastal road links the naval base with the airfield and former flying-boat base to the E and ESE respectively. A hospital is located on the N side of this road on the W outskirts of Ban Sattahip. It is here that the main Chanthaburi/Krung Thep road turns northwards.

## 2. Minor Ports and Landings

Minor ports and landings handle a large portion of Thailand's local trade and overseas exports. None have alongside berthing facilities for seagoing vessels. Cargo must be handled from anchorage by lighters. The more important minor ports include Chanthaburi on the northeastern shore of the Gulf of Siam; Samut Songkhram, Prachuap Khiri Kha, Chumphon, Surat Thani, Songkla, Pattani, and Narathiwat on the western shore of the Gulf; and Ban Kantang, Iruket, Ban Takua Pa, and Khao Hua Khang on the western coast of the Malay Peninsula.

### f. Air Facilities (SECRET)

#### GENERAL:

There are 36 airfields and one seaplane station in the system. The best airfield in the system is Don Muang, near Bangkok. It has a 9,340 foot concrete runway and good facilities. Ban Takli has a 10,000 foot runway but lacks necessary weight-bearing capacity for medium bomber aircraft. The remaining two Class One airfields, Koke Kathiem and Kakhon Ratchasima, have runways of 7,300 feet and good facilities. All of these four Class One airfields are utilized by the Royal Thai Air Force and could support jet fighter operations.

The single Class Two airfield, Prachuap Khiri Khan, has a 6,000 foot road and gravel runway and few facilities.

T-11-18

Deleted by

7102AC/14:266

SECRET

3800.15

SEN: 00449

19 Aug '60

PAGES T-II-19 to T-II-24  
Deleted by

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

NAME: UBON 2 Air Facility Site (See Encl (59) to graphic section) DOI up to 8 MAR 57

CO-ORDINATES: 15°12'N, 104°54'E

ELEVATION (Ft): 0

LOCATION:

This site is located 1 1/2 nm south of the city of UBON and also south of the Nam Mun River which passes on the south side of the town. UBON 2 is surrounded by and is a part of the Thai Army installation which houses the 6th RCT and 6th Military Circle. The airfield site is oriented in an east-west direction.

SIGNIFICANCE:

This airfield site is inactive and unserviceable. With a little effort to smooth the surface, it could handle small liaison type aircraft. Several Thai Army Installations possess a small airstrip for L-20 type aircraft, but in this case, the site is probably a parade and training ground. The surface appears sufficiently high to be capable of year-round operations and not subject to flooding during the rainy season. The surface is sandy soil and could be extended to the east.

COMMENTS:

This Air Facility could be used as a HLZ (self contained unit).

\* \* \*

NAME: UBON 3 Air Facility Site (See Encl (59) to graphic section) DOI up to 8 MAY 57

CO-ORDINATES: 15°20'N, 104°49'E

ELEVATION (Ft):

LOCATION:

7 nm NNW of the city of UBON. A road from UBON passes north-south on the east side of the site. The strip is oriented in a NE-SW direction.

SIGNIFICANCE: The airfield site is completely inactive and unserviceable. It was probably last used in WW II when it was constructed by the Japanese. The surface has been cut by deep ruts almost across its entire length except at the SW end. If the SW end were cleared and smoothed, it could probably handle small liaison-type aircraft. If the entire strip were improved, its sandy soil surface could probably support C-47 type aircraft, at least during the dry season. The strip would be unserviceable in rainy season.

COMMENTS:

This Air Facility site could be used as a HLZ (self contained unit).

\* \* \*

DOI up to MAY 59

NAME: BAN TA KHEI (See Encl (60) to Graphic section)

CO-ORDINATES: 15°17'N, 100°18'E

ELEVATION (Ft): 100

TWO RUNWAYS:

(1) 10,000' x 200' concrete construction; capacity 25,000 lbs per wheel; orientation (MAG) 18-35; C-47, T-6, T-33, and F-84 type aircraft have used this field.

(2) 7,500' x 240' Laterite; very poor condition; capacity C-47 emergency only; orientation (MAG) 04-24; extensibility 200 ft.

APPROACH OBSTRUCTIONS:

N S ridge of hills to 1250' about 10 miles E; small 300' to 500' hills to E. of the field.

SECRET

T-11-25

SECRET  
SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS

#### TAXIWAYS:

Perimeter, fair weather taxiing; PSP taxiway to parking area. New 10,000' concrete taxiway completed.

#### PARKING:

Asphalt parking area (490' x 110') just W of N end of Runway (1); concrete hangar apron (135' x 45').

#### NAVIGATION FACILITIES:

Navigation/Landing Aids: Tower, point-to-point, VHF-DF, air-ground. (RTAF).

Communications: Telegraph in Ban Ta Khli (town). Telephone line to Bangkok.

#### SERVICES:

Fuel: Limited drum storage, hand pumps. Five tanks, 13,860 U.S. gallons each. (Not in use) location 3 km SE of runway.

Aircraft Maintenance: Organizational.

Other: Firefighting and crash equipment.

#### FIXED INSTALLATIONS:

Hangars: Four (4); 2 (130'x130') metal, 2 (130'x130') concrete, located W side of runway.

Personnel Accommodations: Barracks, officers quarters for approx 6 officers, E.M. quarters for 30 personnel, mess halls. Additional housing under construction on road to town.

Ordnance Area: 19 ordnance shelters (40'x20') at SW, fair condition (1-56). Additional ammunition storage planned.

Misc. Bldgs: Administration, operations, link trainer, power plant, various domestic and technical bldgs. Field maintenance shops under construction; (est) 1 July 1960, completion date.

#### MISCELLANEOUS:

Electric Supply: Diesel driven generators, additional generators planned.

Water Supply: Three water towers (60' high) on base; source rain water from reservoir. A water supply canal is under construction from a local irrigation canal to base. Scarcity of water in area is a serious problem.

Other: Cranes, jeeps, ambulances.

#### TRANSPORTATION:

Road: Gravel road to Ban Ta Khli. Gravel road to Ban Tha Hin 32 miles SE, asphalt road from Ban Tha Hin to Bangkok.

Rail: Station at Ban Ta Khli, on line to Bangkok, located on E side of field.

Water: Mae Nam Chao Phraya River 4 miles SW. A large straight canal is to the S of field.

#### SIGNIFICANCE:

Ban Ta Khli airfield is being developed into an important Royal Thai Air Force Base. Planned development includes construction of additional taxiways, parking aprons, and additional fuel storage.

This airfield was turned over to RTAF on 30 April 59. Airfield housing and maintenance facilities are inadequate to support US operations. Runway and parking ramp sufficient in size and strength to accommodate any fighter operations.